UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_7 Status: SPD2_N O_8 Status: CAB_R	ON ON	ON ON	
3A-2-B.196	Set the CAN BUS board address to 30	30	30	
3A-2-B.197	Select "CAN BUS I/F Side" to A	A	A	
3A-2-B.198	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.199	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: ER1_N O_2 Status: TPD2 O_3 Status: TPD6 O_4 Status: SPD3_N O_5 Status: MPD_N O_6 Status: UPD1 O_7 Status: SPD2_N O_8 Status: CAB_R	NOK OK ON ON ON ON OFF ON ON ON	NOK OK ON ON ON ON OFF ON ON ON	
3A-2-B.200	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-2-B.201	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-2-B.202	Disconnect current probe	OK	OK	
3A-2-B.203	Connect outlet cables to active load	OK	OK	
3A-2-B.204	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.205	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	OK OK ON	OK OK ON	
3A-2-B.206	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-2-B.207	Select "CAN BUS I/F Side" to B	B	B	
3A-2-B.208	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-2-B.209	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.210	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	OK OK OFF	OK OK OFF	
3A-2-B.211	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.212	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.213	Verify the status of the following flags:			

DATE: 22.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	OK OK ON	OK OK ON	
3A-2-B.214	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.6.6 ESEM 3A-2 OUT 6 CURRENT LIMITERS

3A-2-B.215	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.216	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: ER1_N to O_8 CMD: CAB_R From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK OFF OFF	 OK OK OFF OFF	
3A-2-B.217	**Current limiters test**	OK	OK	
3A-2-B.218	Set Off in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.219	Disconnect outlet cables	OK	OK	
3A-2-B.220	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-2-B.221	Set short circuit simulator to 3ms	OK	OK	
3A-2-B.222	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.223	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-2-B.224	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-2-B.225	Verify the status of the following flags: BOARD STATUS	 OK	 OK	
3A-2-B.226	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-2-B.227	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-2-B.228	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-2-B.229	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-2-B.230	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_47 in the end of document
3A-2-B.231	Measure in the previous picture the current limitation value	6,50A±10%	6,50A	
3A-2-B.232	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5,10ms	
3A-2-B.233	Verify with multimeter the absence of output voltage across load 6	0,00V±1,00V	0,00V	
3A-2-B.234	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.235	Verify the status of the following flags:			

DATE: 22.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model **PFM** Item **AMS02 POWER DISTRIBUTION SYSTEM** C.I. **PDS 18** S/N **FM01**

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS	NOK	NOK	
	OVT Alarm	OK	OK	
	O_1 Status: ER1_N	ON	ON	
	O_2 Status: TPD2	ON	ON	
	O_3 Status: TPD6	ON	ON	
	O_4 Status: SPD3_N	ON	ON	
	O_5 Status: MPD_N	ON	ON	
	O_6 Status: UPD1	OFF	OFF	
	O_7 Status: SPD2_N	ON	ON	
	O_8 Status: CAB_R	ON	ON	
3A-2-B.236	Set the CAN BUS board address to 30	30	30	
3A-2-B.237	Select "CAN BUS I/F Side" to A	A	A	
3A-2-B.238	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.239	Verify the status of the following flags:			
	BOARD STATUS	NOK	NOK	
	OVT Alarm	OK	OK	
	O_1 Status: ER1_N	ON	ON	
	O_2 Status: TPD2	ON	ON	
	O_3 Status: TPD6	ON	ON	
	O_4 Status: SPD3_N	ON	ON	
	O_5 Status: MPD_N	ON	ON	
	O_6 Status: UPD1	OFF	OFF	
	O_7 Status: SPD2_N	ON	ON	
	O_8 Status: CAB_R	ON	ON	
3A-2-B.240	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-2-B.241	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-2-B.242	Disconnect current probe	OK	OK	
3A-2-B.243	Connect outlet cables to active load	OK	OK	
3A-2-B.244	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.245	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	From O_1 Status: ER1_N to O_8 Status: CAB_R	ON	ON	
3A-2-B.246	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-2-B.247	Select "CAN BUS I/F Side" to B	B	B	
3A-2-B.248	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

DATE: 22.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-2-B.249	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.250	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK OFF	 OK OK OFF	
3A-2-B.251	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.252	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.253	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK ON	 OK OK ON	
3A-2-B.254	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.6.7 ESEM 3A-2 OUT 7 CURRENT LIMITERS

3A-2-B.255	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.256	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: ER1_N to O_8 CMD: CAB_R From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK OFF OFF	 OK OK OFF OFF	
3A-2-B.257	Disconnect outlet cables	OK	OK	
3A-2-B.258	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-2-B.259	Set short circuit simulator to 3ms	OK	OK	
3A-2-B.260	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.261	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-2-B.262	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-2-B.263	Verify the status of the following flags: BOARD STATUS	 OK	 OK	
3A-2-B.264	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-2-B.265	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-2-B.266	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-2-B.267	Create the short circuit pressing start button on short circuit simulator	OK	OK	

DATE: 22.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-2-B.268	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_48 in the end of document
3A-2-B.269	Measure in the previous picture the current limitation value	6,50A±10%	6,47A	
3A-2-B.270	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5,10ms	
3A-2-B.271	Verify with multimeter the absence of output voltage across load 7	0,00V±1,00V	0,00V	
3A-2-B.272	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.273	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: ER1_N O_2 Status: TPD2 O_3 Status: TPD6 O_4 Status: SPD3_N O_5 Status: MPD_N O_6 Status: UPD1 O_7 Status: SPD2_N O_8 Status: CAB_R	 NOK OK ON ON ON ON ON ON OFF ON	 NOK OK ON ON ON ON ON ON OFF ON	
3A-2-B.274	Set the CAN BUS board address to 30	30	30	
3A-2-B.275	Select "CAN BUS I/F Side" to A	A	A	
3A-2-B.276	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.277	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: ER1_N O_2 Status: TPD2 O_3 Status: TPD6 O_4 Status: SPD3_N O_5 Status: MPD_N O_6 Status: UPD1 O_7 Status: SPD2_N O_8 Status: CAB_R	 NOK OK ON ON ON ON ON ON OFF ON	 NOK OK ON ON ON ON ON ON OFF ON	
3A-2-B.278	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-2-B.279	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-2-B.280	Disconnect current probe	OK	OK	
3A-2-B.281	Connect outlet cables to active load	OK	OK	
3A-2-B.282	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.283	Verify the status of the following flags: BOARD STATUS	OK	OK	

DATE: 22.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	OK ON	OK ON	
3A-2-B.284	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-2-B.285	Select "CAN BUS I/F Side" to B	B	B	
3A-2-B.286	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-2-B.287	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.288	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK OFF	 OK OK OFF	
3A-2-B.289	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.290	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.291	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK ON	 OK OK ON	
3A-2-B.292	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.6.8 ESEM 3A-2 OUT 8 CURRENT LIMITERS

3A-2-B.293	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.294	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: ER1_N to O_8 CMD: CAB_R From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK OFF OFF	 OK OK OFF OFF	
3A-2-B.295	Disconnect outlet cables	OK	OK	
3A-2-B.296	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-2-B.297	Set short circuit simulator to 3ms	OK	OK	
3A-2-B.298	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.299	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-2-B.300	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-2-B.301	Verify the status of the following flags: BOARD STATUS	 OK	 OK	

DATE: 22.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-2-B.302	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-2-B.303	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-2-B.304	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-2-B.305	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-2-B.306	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 49 in the end of document
3A-2-B.307	Measure in the previous picture the current limitation value	13,00A±10%	12.66A	
3A-2-B.308	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.14ms	
3A-2-B.309	Verify with multimeter the absence of output voltage across load 8	0,00V±1,00V	0,00V	
3A-2-B.310	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.311	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: ER1_N O_2 Status: TPD2 O_3 Status: TPD6 O_4 Status: SPD3_N O_5 Status: MPD_N O_6 Status: UPD1 O_7 Status: SPD2_N O_8 Status: CAB_R	 NOK OK ON ON ON ON ON ON ON OFF	 NOK OK ON ON ON ON ON ON ON OFF	
3A-2-B.312	Set the CAN BUS board address to 30	30	30	
3A-2-B.313	Select "CAN BUS I/F Side" to A	A	A	
3A-2-B.314	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.315	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: ER1_N O_2 Status: TPD2 O_3 Status: TPD6 O_4 Status: SPD3_N O_5 Status: MPD_N O_6 Status: UPD1 O_7 Status: SPD2_N O_8 Status: CAB_R	 NOK OK ON ON ON ON ON ON ON OFF	 NOK OK ON ON ON ON ON ON ON OFF	
3A-2-B.316	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset

DATE: 22.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-2-B.317	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-2-B.318	Disconnect current probe	OK	OK	
3A-2-B.319	Connect outlet cables to active load	OK	OK	
3A-2-B.320	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.321	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK ON	 OK OK ON	
3A-2-B.322	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-2-B.323	Select "CAN BUS I/F Side" to B	B	B	
3A-2-B.324	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-2-B.325	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.326	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK OFF	 OK OK OFF	
3A-2-B.327	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-2-B.328	Click on Read All command in Digital Readout column	OK	OK	
3A-2-B.329	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK ON	 OK OK ON	
3A-2-B.330	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

DATE: 22.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.5.7 PB2-3 SIDE B

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-3-B.1	Connect BI_120V and BI_120V_RTN power supply signals	OK	OK	
PB2-3-B.2	Verify that all the cables of the section are connected	OK	OK	
PB2-3-B.3	Launch the PDS controller software	Program open	Program open	
PB2-3-B.4	Set to "FM" the window Model	OK	OK	
PB2-3-B.5	Set the CAN BUS board address to 31	31	31	
PB2-3-B.6	select JMDC = 0	0	0	
PB2-3-B.7	select TX = A	A	A	
PB2-3-B.8	select RX = A	A	A	
PB2-3-B.9	Select "CAN BUS I/F Side" to B	B	B	
PB2-3-B.10	Select "PDS Side" to B	B	B	
PB2-3-B.11	Set input bus voltage to 120V	120V±1V	120V	
PB2-3-B.12	Set input bus current limitation to 27,5 A	27,5 A±1A	27,5 A	
PB2-3-B.13	Enable power supply output	enabled	enabled	
PB2-3-B.14	Verify that green led of "power switch box" is lighted	Green led ligthed	Green led ligthed	
PB2-3-B.15	Switch ON the "power switch "of "power switch box"	Switch ON	Switch ON	
PB2-3-B.16	Verify that red led of "power switch box" is lighted	Red led ligthed	Red led ligthed	
PB2-3-B.17	Take note of power supply output current	1,1A±0,5A	1,1A	
PB2-3-B.18	Click on Run flash button	OK	OK	
PB2-3-B.19	Set the CAN BUS board address to 30	30	30	
PB2-3-B.20	Select "CAN BUS I/F Side" to A	A	A	
PB2-3-B.21	Click on Run flash button	OK	OK	
PB2-3-B.22	Set the CAN BUS board address to 31	31	31	
PB2-3-B.23	Select "CAN BUS I/F Side" to B	B	B	
PB2-3-B.24	Click on PB2-3 button	OK	OK	This board is default OFF
PB2-3-B.25	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	Button located on left side of software window
PB2-3-B.26	Click on letter "W" on the right of the "1" value	OK	OK	
PB2-3-B.27	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-B.28	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
PB2-3-B.29	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
PB2-3-B.30	Click on letter "W" on the right of the "0" value	OK	OK	
PB2-3-B.31	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-B.32	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
PB2-3-B.33	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-B.34	Verify the status of the following flags:			

DATE:	TEST CONDUCTOR	QA	CUSTOMER
23.06.09	2010		

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	OFF	OFF	
	27V UV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	OFF	OFF	
PB2-3-B.35	Click on the command READ ALL under the column Analog Readout	OK	OK	
PB2-3-B.36	Verify the value of the following telemetries:			
	Temperature	-40°C<T<80C°	27,5°C	
	Output Voltage	0,00V ±1,00V	0,02V	
	Analog Ref. 2.0V	2,000V±150mV	2,140V	
PB2-3-B.37	Set the CAN BUS board address to 30	30	30	
PB2-3-B.38	Select "CAN BUS I/F Side" to A	A	A	
PB2-3-B.39	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-B.40	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	OFF	OFF	
	27V UNV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	OFF	OFF	
PB2-3-B.41	Set ON on DCDC OFF/ON command window and send the command	OK	OK	Power cell ON
PB2-3-B.42	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-B.43	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	ON	ON	
	27V UNV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	ON	ON	
PB2-3-B.44	Click on ESEM 3A-3 button	OK	OK	
PB2-3-B.45	Set ON in the window "O_1: TPD0" and push the relative "W" command	OK	OK	
PB2-3-B.46	Measure with multimeter the voltage on ESEM 3-A 3 out 1 (Check that load is not connected)	28,00V±1,00V	28,10V	V1
PB2-3-B.47	Click on PB2-3 button	OK	OK	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-3-B.48	Click on the command READ ALL under the column Analog Readout	OK	OK	
PB2-3-B.49	Verify the value of the following telemetry: Output Voltage	V1±1.092V	28,22V	Click on relative Rbutton
PB2-3-B.50	Click on ESEM 3A-3 button	OK	OK	
PB2-3-B.51	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
PB2-3-B.52	Set the CAN BUS board address to 31	31	31	
PB2-3-B.53	Select "CAN BUS I/F Side" to B	B	B	
PB2-3-B.54	Click on PB2-3 button	OK	OK	
PB2-3-B.55	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-B.56	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UNV 29V Trip DCDC OFF/ON CMD	 OK OK OK ON OK OK ON	 OK OK OK ON OK OK ON	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.5.8 ESEM 3A-3 SIDE B

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-B.1	Click on ESEM3-A-3 button	OK	OK	Button located on left side of software window
3A-3-B.2	Connect to active loads outlet 1, 2, 3, 4, 5, 6, 7 and 8.	OK	OK	
3A-3-B.3	Verify that loads are set to 0A current absorption	OK	OK	
3A-3-B.4	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	
3A-3-B.5	Click on letter "W" on the right of the "1" value	OK	OK	
3A-3-B.6	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-3-B.7	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
3A-3-B.8	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
3A-3-B.9	Click on letter "W" on the right of the "0" value	OK	OK	
3A-3-B.10	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-3-B.11	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
3A-3-B.12	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-3-B.13	Push on Read All button in Analog Readout column	OK	OK	
3A-3-B.14	Verify the current telemetries: O_1 Current: TPD0 O_2 Current: TPD4 O_3 Current: ER0_N O_4 Current: MPD_R O_5 Current: SPD3_R O_6 Current: UGPD_R O_7 Current: SPD2_R O_8 Current: CAB_N Temperature Analog Ref. 3.0V	 0,000A±0,225A 0,000A±0,225A 0,000A±0,225A 0,000A±0,225A 0,000A±0,225A 0,000A±0,225A 0,000A±0,225A 0,00A±0,45A -40°C<T<80C° 3,000V±250mV	 0,021V 0,011V 0,057V 0,001V 0,021V 0,042V 0,001V 0,051V 29,43°C 2,951V	Current monitor check
3A-3-B.15	Measure with multimeter the voltage on this ESEM 3-A loads: O_1: TPD0 O_2: TPD4 O_3: ER0_N O_4: MPD_R O_5: SPD3_R O_6: UGPD_R	 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V	 0,01V 0,01V 0,01V 0,01V 0,01V 0,01V	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_7: SPD2_R O_8: CAB_N	0,00V<V<1,00V 0,00V<V<1,00V	0,01V 0,01V	
3A-3-B.16	Set ON in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.17	Measure with multimeter the voltage on this ESEM 3-A loads: O_1: TPD0 O_2: TPD4 O_3: ER0_N O_4: MPD_R O_5: SPD3_R O_6: UGPD_R O_7: SPD2_R O_8: CAB_N	 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V	 28,10V 28,10V 28,10V 28,10V 28,10V 28,10V 28,10V 28,10V	
3A-3-B.18	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.19	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON ON	 OK OK ON ON	
3A-3-B.20	Set Off in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.21	Click on Raed all to in Digital readout column	OK	OK	
3A-3-B.22	Verify from digital readout column that all outlets are OFF	OK	OK	

10.3.2.5.8.1 ESEM 3A-3 OUT 1 CURRENT LIMITERS

3A-3-B.23	Disconnect outlet cables	OK	OK	
3A-3-B.24	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-3-B.25	Set short circuit simulator to 3ms	OK	OK	
3A-3-B.26	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.27	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.28	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.29	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-3-B.30	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.31	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-3-B.32	Monitor the short circuit current with a current probe (Ch1 of oscilloscope)	OK	OK	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)			
3A-3-B.33	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.34	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_50 in the end of document
3A-3-B.35	Measure in the previous picture the current limitation value	6,50A±10%	6.28A	
3A-3-B.36	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.15ms	
3A-3-B.37	Verify with multimeter the absence of output voltage across load 1	0,00V±1,00V	0,00V	
3A-3-B.38	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.39	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	 NOK OK OFF ON ON ON ON ON ON ON	 NOK OK OFF ON ON ON ON ON ON ON	
3A-3-B.40	Set the CAN BUS board address to 30	30	30	
3A-3-B.41	Select "CAN BUS I/F Side" to A	A	A	
3A-3-B.42	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.43	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	 NOK OK OFF ON ON ON ON ON ON ON	 NOK OK OFF ON ON ON ON ON ON ON	
3A-3-B.44	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-3-B.45	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-3-B.46	Disconnect current probe	OK	OK	
3A-3-B.47	Connect outlet cables to active load	OK	OK	
3A-3-B.48	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-B.49	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	
3A-3-B.50	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-3-B.51	Select "CAN BUS I/F Side" to B	B	B	
3A-3-B.52	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.53	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.54	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF	 OK OK OFF	
3A-3-B.55	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.56	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.57	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	
3A-3-B.58	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.8.2 ESEM 3A-3 OUT 2 CURRENT LIMITERS

3A-3-B.59	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.60	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-3-B.61	Disconnect outlet cables	OK	OK	
3A-3-B.62	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-3-B.63	Set short circuit simulator to 3ms	OK	OK	
3A-3-B.64	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.65	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.66	Create short circuit pressing start button on short circuit simulator	OK	OK	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-B.67	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-3-B.68	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.69	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-3-B.70	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-3-B.71	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.72	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_51 in the end of document
3A-3-B.73	Measure in the previous picture the current limitation value	6,50A±10%	6.30A	
3A-3-B.74	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.10ms	
3A-3-B.75	Verify with multimeter the absence of output voltage across load 2	0,00V±1,00V	0,00V	
3A-3-B.76	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.77	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	 NOK OK ON OFF ON ON ON ON ON ON	 NOK OK ON OFF ON ON ON ON ON ON	
3A-3-B.78	Set the CAN BUS board address to 30	30	30	
3A-3-B.79	Select "CAN BUS I/F Side" to A	A	A	
3A-3-B.80	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.81	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R	 NOK OK ON OFF ON ON ON ON ON	 NOK OK ON OFF ON ON ON ON ON	

DATE: 23.06.09	TEST CONDUCTOR GF 2010	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_8 Status: CAB_N	ON	ON	
3A-3-B.82	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-3-B.83	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-3-B.84	Disconnect current probe	OK	OK	
3A-3-B.85	Connect outlet cables to active load	OK	OK	
3A-3-B.86	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.87	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	
3A-3-B.88	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-3-B.89	Select "CAN BUS I/F Side" to B	B	B	
3A-3-B.90	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.91	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.92	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF	 OK OK OFF	
3A-3-B.93	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.94	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.95	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	
3A-3-B.96	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.5.8.3 ESEM 3A-3 OUT 3 CURRENT LIMITERS

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-B.97	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.98	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-3-B.99	Disconnect outlet cables	OK	OK	
3A-3-B.100	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-3-B.101	Set short circuit simulator to 3ms	OK	OK	
3A-3-B.102	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.103	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.104	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.105	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-3-B.106	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.107	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-3-B.108	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-3-B.109	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.110	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 52 in the end of document
3A-3-B.111	Measure in the previous picture the current limitation value	6,50A±10%	6.37A	
3A-3-B.112	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.07ms	
3A-3-B.113	Verify with multimeter the absence of output voltage across load 3	0,00V±1,00V	0,00V	
3A-3-B.114	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.115	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R	 NOK OK ON ON OFF ON ON ON	 NOK OK ON ON OFF ON ON ON	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_7 Status: SPD2_R O_8 Status: CAB_N	ON ON	ON ON	
3A-3-B.116	Set the CAN BUS board address to 30	30	30	
3A-3-B.117	Select "CAN BUS I/F Side" to A	A	A	
3A-3-B.118	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.119	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	NOK OK ON ON OFF ON ON ON ON ON	NOK OK ON ON OFF ON ON ON ON ON	
3A-3-B.120	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-3-B.121	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-3-B.122	Disconnect current probe	OK	OK	
3A-3-B.123	Connect outlet cables to active load	OK	OK	
3A-3-B.124	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.125	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK ON	OK OK ON	
3A-3-B.126	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-3-B.127	Select "CAN BUS I/F Side" to B	B	B	
3A-3-B.128	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.129	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.130	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK OFF	OK OK OFF	
3A-3-B.131	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.132	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.133	Verify the status of the following flags:			

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK ON	OK OK ON	
3A-3-B.134	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.8.4 ESEM 3A-3 OUT 4 CURRENT LIMITERS

3A-3-B.135	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.136	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-3-B.137	Disconnect outlet cables	OK	OK	
3A-3-B.138	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-3-B.139	Set short circuit simulator to 3ms	OK	OK	
3A-3-B.140	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.141	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.142	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.143	Verify the status of the following flags: BOARD STATUS	 OK	 OK	
3A-3-B.144	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.145	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-3-B.146	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-3-B.147	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.148	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 53 in the end of document
3A-3-B.149	Measure in the previous picture the current limitation value	6,50A±10%	6.50A	
3A-3-B.150	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.16ms	
3A-3-B.151	Verify with multimeter the absence of output voltage across load 4	0,00V±1,00V	0,00V	
3A-3-B.152	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.153	Verify the status of the following flags: BOARD STATUS OVT Alarm	 NOK OK	 NOK OK	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_1 Status: TPD0	ON	ON	
	O_2 Status: TPD4	ON	ON	
	O_3 Status: ER0_N	ON	ON	
	O_4 Status: MPD_R	OFF	OFF	
	O_5 Status: SPD3_R	ON	ON	
	O_6 Status: UGPD_R	ON	ON	
	O_7 Status: SPD2_R	ON	ON	
	O_8 Status: CAB_N	ON	ON	
3A-3-B.154	Set the CAN BUS board address to 30	30	30	
3A-3-B.155	Select "CAN BUS I/F Side" to A	A	A	
3A-3-B.156	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.157	Verify the status of the following flags:			
	BOARD STATUS	NOK	NOK	
	OVT Alarm	OK	OK	
	O_1 Status: TPD0	ON	ON	
	O_2 Status: TPD4	ON	ON	
	O_3 Status: ER0_N	ON	ON	
	O_4 Status: MPD_R	OFF	OFF	
	O_5 Status: SPD3_R	ON	ON	
	O_6 Status: UGPD_R	ON	ON	
	O_7 Status: SPD2_R	ON	ON	
	O_8 Status: CAB_N	ON	ON	
3A-3-B.158	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-3-B.159	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-3-B.160	Disconnect current probe	OK	OK	
3A-3-B.161	Connect outlet cables to active load	OK	OK	
3A-3-B.162	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.163	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	From O_1 Status: TPD0 to O_8 Status: CAB_N	ON	ON	
3A-3-B.164	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-3-B.165	Select "CAN BUS I/F Side" to B	B	B	
3A-3-B.166	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.167	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.168	Verify the status of the following flags:			

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK OFF	OK OK OFF	
3A-3-B.169	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.170	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.171	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK ON	OK OK ON	
3A-3-B.172	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.8.5 ESEM 3A-3 OUT 5 CURRENT LIMITERS

3A-3-B.173	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.174	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK OFF OFF	OK OK OFF OFF	
3A-3-B.175	Disconnect outlet cables	OK	OK	
3A-3-B.176	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-3-B.177	Set short circuit simulator to 3ms	OK	OK	
3A-3-B.178	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.179	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.180	Create short circuit pressing start button on short circuit simulator			
3A-3-B.181	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-3-B.182	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.183	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-3-B.184	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-3-B.185	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.186	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_54 in the end of document
3A-3-B.187	Measure in the previous picture the current limitation value	6,50A±10%	6.44A	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-B.188	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.03ms	
3A-3-B.189	Verify with multimeter the absence of output voltage across load 5	0,00V±1,00V	0,00V	
3A-3-B.190	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.191	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	 NOK OK ON ON ON ON OFF ON ON ON	 NOK OK ON ON ON ON OFF ON ON ON	
3A-3-B.192	Set the CAN BUS board address to 30	30	30	
3A-3-B.193	Select "CAN BUS I/F Side" to A	A	A	
3A-3-B.194	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.195	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	 NOK OK ON ON ON ON OFF ON ON ON	 NOK OK ON ON ON ON OFF ON ON ON	
3A-3-B.196	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-3-B.197	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-3-B.198	Disconnect current probe	OK	OK	
3A-3-B.199	Connect outlet cables to active load	OK	OK	
3A-3-B.200	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.201	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	

DATE: 23.06.09	TEST CONDUCTOR 2010	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-B.202	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-3-B.203	Select "CAN BUS I/F Side" to B	B	B	
3A-3-B.204	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.205	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.206	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF	 OK OK OFF	
3A-3-B.207	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.208	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.209	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	
3A-3-B.210	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.8.6 ESEM 3A-3 OUT 6 CURRENT LIMITERS

3A-3-B.211	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.212	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-3-B.213	Disconnect outlet cables	OK	OK	
3A-3-B.214	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-3-B.215	Set short circuit simulator to 3ms	OK	OK	
3A-3-B.216	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.217	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.218	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.219	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-3-B.220	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-B.221	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-3-B.222	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-3-B.223	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.224	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 55 in the end of document
3A-3-B.225	Measure in the previous picture the current limitation value	6,50A±10%	6.17A	
3A-3-B.226	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.23ms	
3A-3-B.227	Verify with multimeter the absence of output voltage across load 6	0,00V±1,00V	0,00V	
3A-3-B.228	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.229	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	 NOK OK ON ON ON ON ON OFF ON ON	 NOK OK ON ON ON ON ON OFF ON ON	
3A-3-B.230	Set the CAN BUS board address to 30	30	30	
3A-3-B.231	Select "CAN BUS I/F Side" to A	A	A	
3A-3-B.232	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.233	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	 NOK OK ON ON ON ON ON OFF ON ON	 NOK OK ON ON ON ON ON OFF ON ON	
3A-3-B.234	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-3-B.235	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-3-B.236	Disconnect current probe	OK	OK	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-B.237	Connect outlet cables to active load	OK	OK	
3A-3-B.238	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.239	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	
3A-3-B.240	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-3-B.241	Select "CAN BUS I/F Side" to B	B	B	
3A-3-B.242	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.243	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.244	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF	 OK OK OFF	
3A-3-B.245	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.246	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.247	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	
3A-3-B.248	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

DATE: 23.06.09	TEST CONDUCTOR 2010	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.5.8.7 ESEM 3A-3 OUT 7 CURRENT LIMITERS

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-B.249	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.250	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-3-B.251	Disconnect outlet cables	OK	OK	
3A-3-B.252	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-3-B.253	Set short circuit simulator to 3ms	OK	OK	
3A-3-B.254	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.255	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.256	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.257	Verify the status of the following flags: BOARD STATUS	 OK	 OK	
3A-3-B.258	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.259	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-3-B.260	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-3-B.261	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.262	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 56 in the end of document
3A-3-B.263	Measure in the previous picture the current limitation value	6,50A±10%	6.21A	
3A-3-B.264	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.18ms	
3A-3-B.265	Verify with multimeter the absence of output voltage across load 7	0,00V±1,00V	0,00V	
3A-3-B.266	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.267	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R	 NOK OK ON ON ON ON ON ON	 NOK OK ON ON ON ON ON ON	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_7 Status: SPD2_R O_8 Status: CAB_N	OFF ON	OFF ON	
3A-3-B.268	Set the CAN BUS board address to 30	30	30	
3A-3-B.269	Select "CAN BUS I/F Side" to A	A	A	
3A-3-B.270	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.271	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	NOK OK ON ON ON ON ON ON OFF ON	NOK OK ON ON ON ON ON ON OFF ON	
3A-3-B.272	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-3-B.273	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-3-B.274	Disconnect current probe	OK	OK	
3A-3-B.275	Connect outlet cables to active load	OK	OK	
3A-3-B.276	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.277	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK ON	OK OK ON	
3A-3-B.278	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-3-B.279	Select "CAN BUS I/F Side" to B	B	B	
3A-3-B.280	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.281	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.282	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK OFF	OK OK OFF	
3A-3-B.283	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.284	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.285	Verify the status of the following flags:			

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK ON	OK OK ON	
3A-3-B.286	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.8.8 ESEM 3A-3 OUT 8 CURRENT LIMITERS

3A-3-B.287	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.288	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-3-B.289	Disconnect outlet cables	OK	OK	
3A-3-B.290	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-3-B.291	Set short circuit simulator to 3ms	OK	OK	
3A-3-B.292	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.293	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.294	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.295	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-3-B.296	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-3-B.297	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-3-B.298	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-3-B.299	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-3-B.300	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_57 in the end of document
3A-3-B.301	Measure in the previous picture the current limitation value	13,00A±10%	12.36A	
3A-3-B.302	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.03ms	
3A-3-B.303	Verify with multimeter the absence of output voltage across load 8	0,00V±1,00V	0,00V	
3A-3-B.304	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.305	Verify the status of the following flags: BOARD STATUS OVT Alarm	 NOK OK	 NOK OK	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_1 Status: TPD0	ON	ON	
	O_2 Status: TPD4	ON	ON	
	O_3 Status: ER0_N	ON	ON	
	O_4 Status: MPD_R	ON	ON	
	O_5 Status: SPD3_R	ON	ON	
	O_6 Status: UGPD_R	ON	ON	
	O_7 Status: SPD2_R	ON	ON	
	O_8 Status: CAB_N	OFF	OFF	
3A-3-B.306	Set the CAN BUS board address to 30	30	30	
3A-3-B.307	Select "CAN BUS I/F Side" to A	A	A	
3A-3-B.308	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.309	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: TPD0 O_2 Status: TPD4 O_3 Status: ER0_N O_4 Status: MPD_R O_5 Status: SPD3_R O_6 Status: UGPD_R O_7 Status: SPD2_R O_8 Status: CAB_N	 NOK OK ON ON ON ON ON ON ON OFF	 NOK OK ON ON ON ON ON ON ON OFF	
3A-3-B.310	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-3-B.311	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-3-B.312	Disconnect current probe	OK	OK	
3A-3-B.313	Connect outlet cables to active load	OK	OK	
3A-3-B.314	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.315	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	
3A-3-B.316	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-3-B.317	Select "CAN BUS I/F Side" to B	B	B	
3A-3-B.318	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.319	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.320	Verify the status of the following flags:			

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	OK OK OFF	OK OK OFF	
3A-3-B.321	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-3-B.322	Click on Read All command in Digital Readout column	OK	OK	
3A-3-B.323	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON	 OK OK ON	
3A-3-B.324	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-B.325	Switch OFF main power bus	OFF	OFF	

DATE: 23.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.5.9 PB2-4 SIDE B

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-4-B.1	Connect BI_120V and BI_120V_RTN power supply signals	OK	OK	
PB2-4-B.2	Verify that all the cables of the section are connected	OK	OK	
PB2-4-B.3	Launch the PDS controller software	Program open	Program open	
PB2-4-B.4	Set to "FM" the window Model	OK	OK	
PB2-4-B.5	Set the CAN BUS board address to 31	31	31	
PB2-4-B.6	select JMDC = 0	0	0	
PB2-4-B.7	select TX = A	A	A	
PB2-4-B.8	select RX = A	A	A	
PB2-4-B.9	Select "CAN BUS I/F Side" to B	B	B	
PB2-4-B.10	Select "PDS Side" to B	B	B	
PB2-4-B.11	Set input bus voltage to 120V	120V±1V	120V	
PB2-4-B.12	Set input bus current limitation to 27,5 A	27,5 A±1A	27,5 A	
PB2-4-B.13	Enable power supply output	enabled	enabled	
PB2-4-B.14	Verify that green led of "power switch box" is lighted	Green led ligthed	Green led ligthed	
PB2-4-B.15	Switch ON the "power switch "of "power switch box"	Switch ON	Switch ON	
PB2-4-B.16	Verify that red led of "power switch box" is lighted	Red led ligthed	Red led ligthed	
PB2-4-B.17	Take note of power supply output current	1,1A±0,5A	1,1A	
PB2-4-B.18	Click on Run flash button	OK	OK	
PB2-4-B.19	Set the CAN BUS board address to 30	30	30	
PB2-4-B.20	Select "CAN BUS I/F Side" to A	A	A	
PB2-4-B.21	Click on Run flash button	OK	OK	
PB2-4-B.22	Set the CAN BUS board address to 31	31	31	
PB2-4-B.23	Select "CAN BUS I/F Side" to B	B	B	
PB2-4-B.24	Click on PB2-1 button	OK	OK	This board is default ON
PB2-4-B.25	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	Button located on left side of software window
PB2-4-B.26	Click on letter "W" on the right of the "1" value	OK	OK	
PB2-4-B.27	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-B.28	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
PB2-4-B.29	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
PB2-4-B.30	Click on letter "W" on the right of the "0" value	OK	OK	
PB2-4-B.31	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-B.32	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
PB2-4-B.33	Verify the status of the following flags: BOARD STATUS	OK	OK	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	ON	ON	
	27V UV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	ON	ON	
PB2-4-B.34	Measure with multimeter the voltage on ESEM 3A-4 out 1 (Check that load is not connected)	28,00V±1,00V	28,10V	V1
PB2-4-B.35	Verify the value of the following telemetry: Output Voltage	V1±1.092V	28,25V	Click on relative Rbutton
PB2-4-B.36	Set OFF on DCDC ON /OFF command window and send the command	OK	OK	Power cell OFF
PB2-4-B.37	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-B.38	Verify the status of the following flags: BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	OFF	OFF	
	27V UNV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	OFF	OFF	
PB2-4-B.39	Click on the command READ ALL under the column Analog Readout	OK	OK	
PB2-4-B.40	Verify the value of the following telemetries: Temperature	-40°C<T<80C°	37,58°C	
	Analog Ref. 2.0V	2,000V±150mV	2,140V	
PB2-4-B.41	Verify the following analog monitor: Output Voltage	0,00V±1.092V	0,050V	
PB2-4-B.42	Measure with multimeter the voltage on ESEM 3A-4 out 1 (Check that load is not connected)	0,00V±0,10V	0,01V	
PB2-4-B.43	Set the CAN BUS board address to 30	30	30	
PB2-4-B.44	Select "CAN BUS I/F Side" to A	A	A	
PB2-4-B.45	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-B.46	Verify the status of the following flags: BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	OFF	OFF	
	27V UNV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	OFF	OFF	

DATE: 24.06.09	TEST CONDUCTOR GF 2010	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-4-B.47	Set ON on DCDC OFF/ON command window and send the command	OK	OK	Power cell ON
PB2-4-B.48	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-B.49	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	ON	ON	
	27V UNV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	ON	ON	
PB2-4-B.50	Set the CAN BUS board address to 31	31	31	
PB2-4-B.51	Select "CAN BUS I/F Side" to B	B	B	
PB2-4-B.52	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-B.53	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	ON	ON	
	27V UNV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	ON	ON	

DATE: 26.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.5.10 ESEM 3A-4 SIDE B

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.1	Click on ESEM 3A-4 button	OK	OK	Button located on left side of software window
3A-4-B.2	Connect to active loads outlet 1, 2, 3, 4, 5, 6, 7 and 8.	OK	OK	
3A-4-B.3	Verify that loads are set to 0A current absorption	OK	OK	
3A-4-B.4	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	
3A-4-B.5	Click on letter "W" on the right of the "1" value	OK	OK	
3A-4-B.6	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-4-B.7	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
3A-4-B.8	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
3A-4-B.9	Click on letter "W" on the right of the "0" value	OK	OK	
3A-4-B.10	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-4-B.11	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
3A-4-B.12	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 CMD: JPD_R O_2 CMD: ER1_R O_3 CMD: SPD1_R O_4 CMD: ER0_R O_5 CMD: UPD0 O_6 CMD: SPD0_N O_7 CMD: TPD5 O_8 CMD: TTPD_N O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 OK OK ON OFF OFF OFF OFF OFF OFF OFF ON OFF OFF OFF OFF OFF OFF OFF	 OK OK ON OFF OFF OFF OFF OFF OFF OFF ON OFF OFF OFF OFF OFF OFF OFF	
3A-4-B.13	Push on Read All button in Analog Readout column	OK	OK	
3A-4-B.14	Verify the current telemetries: O_1 Current: JPD_R O_2 Current: ER1_R O_3 Current: SPD1_R	 0,000A±0,225A 0,000A±0,225A 0,000A±0,225A	 0,100A 0,080A 0,067A	Current monitor check

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_4 Current: ER0_R	0,000A±0,225A	0,120A	
	O_5 Current: UPD0	0,000A±0,225A	-0,100A	
	O_6 Current: SPD0_N	0,000A±0,225A	-0,098A	
	O_7 Current: TPD5	0,000A±0,225A	-0,084A	
	O_8 Current: TTPD_N	0,00A±0,45A	-0,075A	
	Temperature	-40°C<T<80C°	30,73°C	
	Analog Ref. 3.0V	3,000V±250mV	2,976	
3A-4-B.15	Measure with multimeter the voltage on this ESEM 3-A loads:			
	O_1: JPD_R	28,00V±1,00V	28,10V	
	O_2: ER1_R	0,00V<V<1,00V	0,01V	
	O_3: SPD1_R	0,00V<V<1,00V	0,01V	
	O_4: ER0_R	0,00V<V<1,00V	0,01V	
	O_5: UPD0	0,00V<V<1,00V	0,01V	
	O_6: SPD0_N	0,00V<V<1,00V	0,01V	
	O_7: TPD5	0,00V<V<1,00V	0,01V	
	O_8: TTPD_N	0,00V<V<1,00V	0,01V	
3A-4-B.16	Set "OFF" in the window "O_1: JPD_R" and push the relative "W" command	OK	OK	
3A-4-B.17	Measure with multimeter the voltage on O_1: JPD_R	0,00V<V<1,00V	0,00V	
3A-4-B.18	Click on Read All in Digital readout column and verify O_1 CMD: JPD_R	OFF	OFF	
3A-4-B.19	Set ON in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.20	Measure with multimeter the voltage on this ESEM 3-A loads:			
	O_1: JPD_R	28,00V±1,00V	28,00V	
	O_2: ER1_R	28,00V±1,00V	28,00V	
	O_3: SPD1_R	28,00V±1,00V	28,00V	
	O_4: ER0_R	28,00V±1,00V	28,00V	
	O_5: UPD0	28,00V±1,00V	28,00V	
	O_6: SPD0_N	28,00V±1,00V	28,00V	
	O_7: TPD5	28,00V±1,00V	28,00V	
	O_8: TTPD_N	28,00V±1,00V	28,00V	
3A-4-B.21	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.22	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	From O_1 CMD: JPD_R to O_8 CMD: TTPD_N	ON	ON	
	From O_1 Status: JPD_R to O_8 Status: TTPD_N	ON	ON	
3A-4-B.23	Set Off in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.24	Click on Raed all to in Digital readout column	OK	OK	
3A-4-B.25	Verify from digital readout column that all outlets are OFF	OK	OK	

DATE: 26.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.5.10.1 ESEM 3A-4 OUT 1 CURRENT LIMITERS

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.26	Disconnect outlet cables	OK	OK	
3A-4-B.27	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-4-B.28	Set short circuit simulator to 3ms	OK	OK	
3A-4-B.29	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.30	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.31	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.32	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-4-B.33	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.34	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-4-B.35	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-4-B.36	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.37	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 58 in the end of document
3A-4-B.38	Measure in the previous picture the current limitation value	6,50A±10%	6.18A	
3A-4-B.39	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.14ms	
3A-4-B.40	Verify with multimeter the absence of output voltage across load 1	0,00V±1,00V	0,00V	
3A-4-B.41	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.42	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 NOK OK OFF ON ON ON ON ON ON ON	 NOK OK OFF ON ON ON ON ON ON ON	
3A-4-B.43	Set the CAN BUS board address to 30	30	30	
3A-4-B.44	Select "CAN BUS I/F Side" to A	A	A	
3A-4-B.45	Click on Read All command in Digital Readout column	OK	OK	

DATE: 26.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.46	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 NOK OK OFF ON ON ON ON ON ON ON	 NOK OK OFF ON ON ON ON ON ON ON	
3A-4-B.47	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-4-B.48	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-4-B.49	Disconnect current probe	OK	OK	
3A-4-B.50	Connect outlet cables to active load	OK	OK	
3A-4-B.51	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.52	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	
3A-4-B.53	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-4-B.54	Select "CAN BUS I/F Side" to B	B	B	
3A-4-B.55	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.56	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.57	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF	 OK OK OFF	
3A-4-B.58	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.59	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.60	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	
3A-4-B.61	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.5.10.2 ESEM 3A-4 OUT 2 CURRENT LIMITERS

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.62	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.63	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: : JPD_R to O_8 CMD: TTPD_N From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-4-B.64	Disconnect outlet cables	OK	OK	
3A-4-B.65	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-4-B.66	Set short circuit simulator to 3ms	OK	OK	
3A-4-B.67	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.68	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.69	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.70	Verify the status of the following flags: BOARD STATUS	 OK	 OK	
3A-4-B.71	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.72	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-4-B.73	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-4-B.74	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.75	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_59 in the end of document
3A-4-B.76	Measure in the previous picture the current limitation value	6,50A±10%	6.26A	
3A-4-B.77	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.13ms	
3A-4-B.78	Verify with multimeter the absence of output voltage across load 2	0,00V±1,00V	0,00V	
3A-4-B.79	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.80	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N	 NOK OK ON OFF ON ON ON ON	 NOK OK ON OFF ON ON ON ON	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_7 Status: TPD5 O_8 Status: TTPD_N	ON ON	ON ON	
3A-4-B.81	Set the CAN BUS board address to 30	30	30	
3A-4-B.82	Select "CAN BUS I/F Side" to A	A	A	
3A-4-B.83	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.84	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 NOK OK ON OFF ON ON ON ON ON ON	 NOK OK ON OFF ON ON ON ON ON ON	
3A-4-B.85	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-4-B.86	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-4-B.87	Disconnect current probe	OK	OK	
3A-4-B.88	Connect outlet cables to active load	OK	OK	
3A-4-B.89	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.90	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	
3A-4-B.91	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-4-B.92	Select "CAN BUS I/F Side" to B	B	B	
3A-4-B.93	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.94	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.95	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF	 OK OK OFF	
3A-4-B.96	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.97	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.98	Verify the status of the following flags:			

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	OK OK ON	OK OK ON	
3A-4-B.99	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.10.3 ESEM 3A-4 OUT 3 CURRENT LIMITERS

3A-4-B.100	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.101	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: : JPD_R to O_8 CMD: TTPD_N From O_1 Status: JPD_R to O_8 Status: TTPD_N	OK OK OFF OFF	OK OK OFF OFF	
3A-4-B.102	Disconnect outlet cables	OK	OK	
3A-4-B.103	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-4-B.104	Set short circuit simulator to 3ms	OK	OK	
3A-4-B.105	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.106	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.107	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.108	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-4-B.109	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.110	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-4-B.111	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-4-B.112	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.113	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 60 in the end of document
3A-4-B.114	Measure in the previous picture the current limitation value	6,50A±10%	6.20A	
3A-4-B.115	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.09ms	
3A-4-B.116	Verify with multimeter the absence of output voltage across load 3	0,00V±1,00V	0,00V	
3A-4-B.117	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.118	Verify the status of the following flags: BOARD STATUS OVT Alarm	NOK OK	NOK OK	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_1 Status: JPD_R	ON	ON	
	O_2 Status: ER1_R	ON	ON	
	O_3 Status: SPD1_R	OFF	OFF	
	O_4 Status: ER0_R	ON	ON	
	O_5 Status: UPD0	ON	ON	
	O_6 Status: SPD0_N	ON	ON	
	O_7 Status: TPD5	ON	ON	
	O_8 Status: TTPD_N	ON	ON	
3A-4-B.119	Set the CAN BUS board address to 30	30	30	
3A-4-B.120	Select "CAN BUS I/F Side" to A	A	A	
3A-4-B.121	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.122	Verify the status of the following flags:			
	BOARD STATUS	NOK	NOK	
	OVT Alarm	OK	OK	
	O_1 Status: JPD_R	ON	ON	
	O_2 Status: ER1_R	ON	ON	
	O_3 Status: SPD1_R	OFF	OFF	
	O_4 Status: ER0_R	ON	ON	
	O_5 Status: UPD0	ON	ON	
	O_6 Status: SPD0_N	ON	ON	
	O_7 Status: TPD5	ON	ON	
	O_8 Status: TTPD_N	ON	ON	
3A-4-B.123	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-4-B.124	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-4-B.125	Disconnect current probe	OK	OK	
3A-4-B.126	Connect outlet cables to active load	OK	OK	
3A-4-B.127	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.128	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	From O_1 Status: JPD_R to O_8 Status: TTPD_N	ON	ON	
3A-4-B.129	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-4-B.130	Select "CAN BUS I/F Side" to B	B	B	
3A-4-B.131	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.132	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.133	Verify the status of the following flags:			

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	OK OK OFF	OK OK OFF	
3A-4-B.134	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.135	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.136	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	OK OK ON	OK OK ON	
3A-4-B.137	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.10.4 ESEM 3A-4 OUT 4 CURRENT LIMITERS

3A-4-B.138	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.139	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: : JPD_R to O_8 CMD: TTPD_N From O_1 Status: JPD_R to O_8 Status: TTPD_N	OK OK OFF OFF	OK OK OFF OFF	
3A-4-B.140	Disconnect outlet cables	OK	OK	
3A-4-B.141	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-4-B.142	Set short circuit simulator to 3ms	OK	OK	
3A-4-B.143	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.144	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.145	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.146	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-4-B.147	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.148	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-4-B.149	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-4-B.150	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.151	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 61 in the end of document
3A-4-B.152	Measure in the previous picture the current limitation value	6,50A±10%	6.28A	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.153	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.18ms	
3A-4-B.154	Verify with multimeter the absence of output voltage across load 4	0,00V±1,00V	0,00V	
3A-4-B.155	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.156	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 NOK OK ON ON ON OFF ON ON ON ON	 NOK OK ON ON ON OFF ON ON ON ON	
3A-4-B.157	Set the CAN BUS board address to 30	30	30	
3A-4-B.158	Select "CAN BUS I/F Side" to A	A	A	
3A-4-B.159	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.160	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 NOK OK ON ON ON OFF ON ON ON ON	 NOK OK ON ON ON OFF ON ON ON ON	
3A-4-B.161	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-4-B.162	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-4-B.163	Disconnect current probe	OK	OK	
3A-4-B.164	Connect outlet cables to active load	OK	OK	
3A-4-B.165	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.166	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.167	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-4-B.168	Select "CAN BUS I/F Side" to B	B	B	
3A-4-B.169	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.170	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.171	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF	 OK OK OFF	
3A-4-B.172	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.173	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.174	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	
3A-4-B.175	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.10.5 ESEM 3A-4 OUT 5 CURRENT LIMITERS

3A-4-B.176	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.177	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: : JPD_R to O_8 CMD: TTPD_N From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-4-B.178	Disconnect outlet cables	OK	OK	
3A-4-B.179	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-4-B.180	Set short circuit simulator to 3ms	OK	OK	
3A-4-B.181	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.182	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.183	Create short circuit pressing start button on short circuit simulator			
3A-4-B.184	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-4-B.185	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.186	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-4-B.187	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-4-B.188	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.189	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 62 in the end of document
3A-4-B.190	Measure in the previous picture the current limitation value	6,50A±10%	6.32A	
3A-4-B.191	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5.81ms	
3A-4-B.192	Verify with multimeter the absence of output voltage across load 5	0,00V±1,00V	0,00V	
3A-4-B.193	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.194	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 NOK OK ON ON ON ON OFF ON ON ON	 NOK OK ON ON ON ON OFF ON ON ON	
3A-4-B.195	Set the CAN BUS board address to 30	30	30	
3A-4-B.196	Select "CAN BUS I/F Side" to A	A	A	
3A-4-B.197	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.198	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 NOK OK ON ON ON ON OFF ON ON ON	 NOK OK ON ON ON ON OFF ON ON ON	
3A-4-B.199	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-4-B.200	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-4-B.201	Disconnect current probe	OK	OK	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.202	Connect outlet cables to active load	OK	OK	
3A-4-B.203	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.204	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	
3A-4-B.205	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-4-B.206	Select "CAN BUS I/F Side" to B	B	B	
3A-4-B.207	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.208	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.209	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF	 OK OK OFF	
3A-4-B.210	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.211	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.212	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	
3A-4-B.213	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.5.10.6 ESEM 3A-4 OUT 6 CURRENT LIMITERS

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.214	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.215	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: : JPD_R to O_8 CMD: TTPD_N From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-4-B.216	Disconnect outlet cables	OK	OK	
3A-4-B.217	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-4-B.218	Set short circuit simulator to 3ms	OK	OK	
3A-4-B.219	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.220	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.221	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.222	Verify the status of the following flags: BOARD STATUS	 OK	 OK	
3A-4-B.223	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.224	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-4-B.225	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-4-B.226	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.227	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_ 63 in the end of document
3A-4-B.228	Measure in the previous picture the current limitation value	6,50A±10%	6,32A	
3A-4-B.229	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5,19ms	
3A-4-B.230	Verify with multimeter the absence of output voltage across load 6	0,00V±1,00V	0,00V	
3A-4-B.231	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.232	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N	 NOK OK ON ON ON ON ON OFF	 NOK OK ON ON ON ON ON OFF	

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_7 Status: TPD5 O_8 Status: TTPD_N	ON ON	ON ON	
3A-4-B.233	Set the CAN BUS board address to 30	30	30	
3A-4-B.234	Select "CAN BUS I/F Side" to A	A	A	
3A-4-B.235	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.236	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 NOK OK ON ON ON ON ON OFF ON ON	 NOK OK ON ON ON ON ON OFF ON ON	
3A-4-B.237	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-4-B.238	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-4-B.239	Disconnect current probe	OK	OK	
3A-4-B.240	Connect outlet cables to active load	OK	OK	
3A-4-B.241	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.242	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	
3A-4-B.243	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-4-B.244	Select "CAN BUS I/F Side" to B	B	B	
3A-4-B.245	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.246	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.247	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF	 OK OK OFF	
3A-4-B.248	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.249	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.250	Verify the status of the following flags:			

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	OK OK ON	OK OK ON	
3A-4-B.251	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.10.7 ESEM 3A-4 OUT 7 CURRENT LIMITERS

3A-4-B.252	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.253	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: : JPD_R to O_8 CMD: TTPD_N From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF OFF	 OK OK OFF OFF	
3A-4-B.254	Disconnect outlet cables	OK	OK	
3A-4-B.255	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-4-B.256	Set short circuit simulator to 3ms	OK	OK	
3A-4-B.257	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.258	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.259	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.260	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-4-B.261	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.262	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-4-B.263	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-4-B.264	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.265	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_64 in the end of document
3A-4-B.266	Measure in the previous picture the current limitation value	6,50A±10%	6,35A	
3A-4-B.267	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5,10ms	
3A-4-B.268	Verify with multimeter the absence of output voltage across load 7	0,00V±1,00V	0,00V	
3A-4-B.269	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.270	Verify the status of the following flags: BOARD STATUS OVT Alarm	 NOK OK	 NOK OK	

DATE: 26.06.09	TEST CONDUCTOR GF 2010	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O_1 Status: JPD_R	ON	ON	
	O_2 Status: ER1_R	ON	ON	
	O_3 Status: SPD1_R	ON	ON	
	O_4 Status: ER0_R	ON	ON	
	O_5 Status: UPD0	ON	ON	
	O_6 Status: SPD0_N	ON	ON	
	O_7 Status: TPD5	OFF	OFF	
	O_8 Status: TTPD_N	ON	ON	
3A-4-B.271	Set the CAN BUS board address to 30	30	30	
3A-4-B.272	Select "CAN BUS I/F Side" to A	A	A	
3A-4-B.273	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.274	Verify the status of the following flags: BOARD STATUS OVT Alarm O_1 Status: JPD_R O_2 Status: ER1_R O_3 Status: SPD1_R O_4 Status: ER0_R O_5 Status: UPD0 O_6 Status: SPD0_N O_7 Status: TPD5 O_8 Status: TTPD_N	 NOK OK ON ON ON ON ON ON OFF ON	 NOK OK ON ON ON ON ON ON OFF ON	
3A-4-B.275	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-4-B.276	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-4-B.277	Disconnect current probe	OK	OK	
3A-4-B.278	Connect outlet cables to active load	OK	OK	
3A-4-B.279	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.280	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	
3A-4-B.281	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-4-B.282	Select "CAN BUS I/F Side" to B	B	B	
3A-4-B.283	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.284	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.285	Verify the status of the following flags:			

DATE: 26.06.09	TEST CONDUCTOR	QA	CUSTOMER

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	OK OK OFF	OK OK OFF	
3A-4-B.286	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.287	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.288	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	OK OK ON	OK OK ON	
3A-4-B.289	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	

10.3.2.5.10.8 ESEM 3A-4 OUT 8 CURRENT LIMITERS

3A-4-B.290	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.291	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: : JPD_R to O_8 CMD: TTPD_N From O_1 Status: JPD_R to O_8 Status: TTPD_N	OK OK OFF OFF	OK OK OFF OFF	
3A-4-B.292	Disconnect outlet cables	OK	OK	
3A-4-B.293	Connect outlet cables to short circuit simulator without amperometer	OK	OK	
3A-4-B.294	Set short circuit simulator to 3ms	OK	OK	
3A-4-B.295	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.296	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.297	Create short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.298	Verify the status of the following flags: BOARD STATUS	OK	OK	
3A-4-B.299	Click on Read all in Digital readout column and verify from outlet status located in Digital readout column that all outlets are on	OK	OK	
3A-4-B.300	Set short circuit simulator to 10ms short circuit duration	OK	OK	
3A-4-B.301	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 28V of a different outlet of Esem3A under test (Ch2 of oscilloscope)	OK	OK	
3A-4-B.302	Create the short circuit pressing start button on short circuit simulator	OK	OK	
3A-4-B.303	Make an hardcopy of the oscilloscope measurements	OK	OK	Add Annex_65 in the end of document
3A-4-B.304	Measure in the previous picture the current limitation value	13,00A±10%	12,45A	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.305	Measure in previous picture the current limitation time	5ms<T_lim<6ms	5,12ms	
3A-4-B.306	Verify with multimeter the absence of output voltage across load 8	0,00V±1,00V	0,00V	
3A-4-B.307	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.308	Verify the status of the following flags:			
	BOARD STATUS	NOK	NOK	
	OVT Alarm	OK	OK	
	O_1 Status: JPD_R	ON	ON	
	O_2 Status: ER1_R	ON	ON	
	O_3 Status: SPD1_R	ON	ON	
	O_4 Status: ER0_R	ON	ON	
	O_5 Status: UPD0	ON	ON	
	O_6 Status: SPD0_N	ON	ON	
	O_7 Status: TPD5	ON	ON	
	O_8 Status: TTPD_N	OFF	OFF	
3A-4-B.309	Set the CAN BUS board address to 30	30	30	
3A-4-B.310	Select "CAN BUS I/F Side" to A	A	A	
3A-4-B.311	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.312	Verify the status of the following flags:			
	BOARD STATUS	NOK	NOK	
	OVT Alarm	OK	OK	
	O_1 Status: JPD_R	ON	ON	
	O_2 Status: ER1_R	ON	ON	
	O_3 Status: SPD1_R	ON	ON	
	O_4 Status: ER0_R	ON	ON	
	O_5 Status: UPD0	ON	ON	
	O_6 Status: SPD0_N	ON	ON	
	O_7 Status: TPD5	ON	ON	
	O_8 Status: TTPD_N	OFF	OFF	
3A-4-B.313	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	Protection reset
3A-4-B.314	Disconnect the short circuit simulator from outlet cables	OK	OK	
3A-4-B.315	Disconnect current probe	OK	OK	
3A-4-B.316	Connect outlet cables to active load	OK	OK	
3A-4-B.317	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.318	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	From O_1 Status: JPD_R to O_8 Status: TTPD_N	ON	ON	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-4-B.319	Set the CAN BUS board address to 31	31	31	In order to verify that CAN BUS 31 is able to reset a protection
3A-4-B.320	Select "CAN BUS I/F Side" to B	B	B	
3A-4-B.321	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.322	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.323	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK OFF	 OK OK OFF	
3A-4-B.324	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
3A-4-B.325	Click on Read All command in Digital Readout column	OK	OK	
3A-4-B.326	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 Status: JPD_R to O_8 Status: TTPD_N	 OK OK ON	 OK OK ON	
3A-4-B.327	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-4-B.328	Switch OFF the "power switch "of "power switch box"	Switch OFF	Switch OFF	
3A-4-B.329	Switch OFF main power bus	Switch OFF	Switch OFF	

DATE: 24.06.09	TEST CONDUCTOR	QA	CUSTOMER

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10.3.2.5.11 ESEM 3-B SIDE B

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3B-B.1	Connect all the loads. The following column resumes the currents (with Main bus equal to 120V):	OK	OK	There is no need to check the current absorption of the loads. CCS load not connected
3B-B.2	Set all the loads of the other boards to 0A	OK	OK	
3B-B.3	Set power supply voltage to 120V	120V ± 0.2V	120V	
3B-B.4	Set power supply current limitation to 27.5A	27.5A±0.5A	27,5A	
3B-B.5	Switch ON the "power switch "of "power switch box"	OK	OK	
3B-B.6	Take note of input current	7,9A±0,5A	7,8	
3B-B.7	Select PDS controller software	program open	OPEN	
3B-B.8	Set the CAN BUS board address to 31	31	31	
3B-B.9	Select JMDC = 0	0	0	
3B-B.10	Select TX = A	A	A	
3B-B.11	Select RX = A	A	A	
3B-B.12	Select "CAN BUS I/F Side" to B	B	B	
3B-B.13	Select "PDS Side" to B	B	B	
3B-B.14	Click on Run flash command	OK	OK	
3B-B.15	Click on ESEM3-B button	OK	OK	Button located on left side of PDS controller software window
3B-B.16	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	
3B-B.17	Click on letter "W" on the right of the "1" value	OK	OK	

OUTLET	CURRENT [A] SET
1	1,200±100mA
2	3,200±100mA
3	1,200±100mA
4	1,200±100mA
5	2,400±100mA
6	1,200±100mA
7	1,200±100mA
8	1,200±100mA
9	1,200±100mA
10	1,200±100mA
11	1,200±100mA
12	3,520±100mA

DATE: 25.06.09	TEST CONDUCTOR GFrao	QA	CUSTOMER

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3B-B.18	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.19	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
3B-B.20	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
3B-B.21	Click on letter "W" on the right of the "0" value	OK	OK	
3B-B.22	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.23	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
3B-B.24	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	O__1 CMD: AH_OUT1	ON	ON	
	O__2 CMD: AH_OUT2	ON	ON	
	O__3 CMD: AH_OUT3	ON	ON	
	O__4 CMD: AH_OUT4	OFF	OFF	
	O__5 CMD: AH_OUT5	OFF	OFF	
	O__6 CMD: AH_OUT6	ON	ON	
	O__7 CMD: AH_OUT7	OFF	OFF	
	O__8 CMD: AH_OUT8	OFF	OFF	
	O__9 CMD: AH_OUT9	OFF	OFF	
	O_10 CMD: AH_OUT10	OFF	OFF	
	O_11 CMD: AH_OUT11	OFF	OFF	
	O_12 CMD: AO_CCEB	OFF	OFF	
	O__1 Status: AH_OUT1	ON	ON	
	O__2 Status: AH_OUT2	ON	ON	
	O__3 Status: AH_OUT3	ON	ON	
	O__4 Status: AH_OUT4	OFF	OFF	
	O__5 Status : AH_OUT5	OFF	OFF	
	O__6 Status: AH_OUT6	ON	ON	
	O__7 Status: AH_OUT7	OFF	OFF	
	O__8 Status: AH_OUT8	OFF	OFF	
	O__9 Status: AH_OUT9	OFF	OFF	
	O_10 Status: AH_OUT10	OFF	OFF	
	O_11 Status: AH_OUT11	OFF	OFF	
	O_12 Status: AO_CCEB	OFF	OFF	
	O_12 Trip: AO_CCEB	OK	OK	
3B-B.25	Push on Read All button in Analog Readout column	OK	OK	
3B-B.26	Take note of the following values in "Analog readout" column:			
	Temperature	-40°C<T<80C°	26,41°C	
	O_12 Current: AO_CCEB	0,00A±0,45A	0,13A	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	Analog Ref. 2.5V	2,500V±150mV	2,49V	
3B-B.27	Set the CAN BUS board address to 30	30	30	
3B-B.28	Select "CAN BUS I/F Side" to A	A	A	
3B-B.29	Click on Run flash button	OK	OK	
3B-B.30	Click on Read All command in Digital Readout column	OK	OK	
3B-B.31	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	O__1 CMD: AH_OUT1	ON	ON	
	O__2 CMD: AH_OUT2	ON	ON	
	O__3 CMD: AH_OUT3	ON	ON	
	O__4 CMD: AH_OUT4	OFF	OFF	
	O__5 CMD: AH_OUT5	OFF	OFF	
	O__6 CMD: AH_OUT6	ON	ON	
	O__7 CMD: AH_OUT7	OFF	OFF	
	O__8 CMD: AH_OUT8	OFF	OFF	
	O__9 CMD: AH_OUT9	OFF	OFF	
	O_10 CMD: AH_OUT10	OFF	OFF	
	O_11 CMD: AH_OUT11	OFF	OFF	
	O_12 CMD: AO_CCEB	OFF	OFF	
	O__1 Status: AH_OUT1	ON	ON	
	O__2 Status: AH_OUT2	ON	ON	
	O__3 Status: AH_OUT3	ON	ON	
	O__4 Status: AH_OUT4	OFF	OFF	
	O__5 Status : AH_OUT5	OFF	OFF	
	O__6 Status: AH_OUT6	ON	ON	
	O__7 Status: AH_OUT7	OFF	OFF	
	O__8 Status: AH_OUT8	OFF	OFF	
	O__9 Status: AH_OUT9	OFF	OFF	
	O_10 Status: AH_OUT10	OFF	OFF	
	O_11 Status: AH_OUT11	OFF	OFF	
	O_12 Status: AO_CCEB	OFF	OFF	
	O_12 Trip: AO_CCEB	OK	OK	
3B-B.32	Push on Read All button in Analog Readout column	OK	OK	
3B-B.33	Take note of the following values in "Analog readout" column:			
	Temperature	-40°C<T<80C°	26,73°C	
	O_12 Current: AO_CCEB	0,00A±0,45A	0,12A	
	Analog Ref. 2.5V	2,500V±150mV	2,50V	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3B-B.34	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3B-B.35	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.36	Verify the status of the following flags: BOARD STATUS OVT Alarm From O__1 CMD: AH_OUT1 to O_11 CMD: AH_OUT11 O_12 CMD: AO_CCEB From O__1 Status: AH_OUT1 to O_11 Status: AH_OUT11 O_12 Status: AO_CCEB O_12 Trip: AO_CCEB	 OK OK OFF OFF OFF OFF OK	 OK OK OFF OFF OFF OFF OK	
3B-B.37	Set the CAN BUS board address to 31	31	31	
3B-B.38	Select "CAN BUS I/F Side" to B	B	B	
3B-B.39	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.40	Verify the status of the following flags: BOARD STATUS OVT Alarm From O__1 CMD: AH_OUT1 to O_11 CMD: AH_OUT11 O_12 CMD: AO_CCEB From O__1 Status: AH_OUT1 to O_11 Status: AH_OUT11 O_12 Status: AO_CCEB O_12 Trip: AO_CCEB	 OK OK OFF OFF OFF OFF OK	 OK OK OFF OFF OFF OFF OK	
3B-B.41	Verify with a multimeter the voltage of the outlets: AH_OUT1 AH_OUT2 AH_OUT3 AH_OUT4 AH_OUT5 AH_OUT6 AH_OUT7 AH_OUT8 AH_OUT9 AH_OUT10 AH_OUT11 AO_CCEB	 V<5,00V V<5,00V V<5,00V V<5,00V V<5,00V V<5,00V V<5,00V V<5,00V V<5,00V V<5,00V V<5,00V V<5,00V	 0,0V 0,0V 0,0V 0,0V 0,0V 0,0V 0,0V 0,0V 0,0V 0,0V 0,0V 0,0V	
3B-B.42	Set ON in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3B-B.43	Take note of input current	21A±1A	20,4A	
3B-B.44	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.45	Verify the status of the following flags:			

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	From O__1 CMD: AH_OUT1 to O_11 CMD: AH_OUT11	ON	ON	
	O_12 CMD: AO_CCEB	ON	ON	
	From O__1 Status: AH_OUT1 to O_11 Status: AH_OUT11	ON	ON	
	O_12 Status: AO_CCEB	ON	ON	
	O_12 Trip: AO_CCEB	OK	OK	
3B-B.46	Set the CAN BUS board address to 30	30	30	
3B-B.47	Select "CAN BUS I/F Side" to A	A	A	
3B-B.48	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.49	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	From O__1 CMD: AH_OUT1 to O_11 CMD: AH_OUT11	ON	ON	
	O_12 CMD: AO_CCEB	ON	ON	
	From O__1 Status: AH_OUT1 to O_11 Status: AH_OUT11	ON	ON	
	O_12 Status: AO_CCEB	ON	ON	
	O_12 Trip: AO_CCEB	OK	OK	
3B-B.50	Set the CAN BUS board address to 31	31	31	
3B-B.51	Select "CAN BUS I/F Side" to B	B	B	
3B-B.52	Connect on the J300 test box the multimeter	OK	Ok	
3B-B.53	Set the power supply voltage in order to have 120V on PDS input (measure on test box)	120,00V±0,20V	120,0V	
3B-B.54	Verify with a multimeter the voltage of the outlets:			Measurement on the load
	AH_OUT1	117,00V<V<120,00V	118,2V	
	AH_OUT2	117,00V<V<120,00V	118,3V	
	AH_OUT3	117,00V<V<120,00V	118,2V	
	AH_OUT4	117,00V<V<120,00V	118,2V	
	AH_OUT5	117,00V<V<120,00V	118,2V	
	AH_OUT6	117,00V<V<120,00V	118,2V	
	AH_OUT7	117,00V<V<120,00V	118,2V	
	AH_OUT8	117,00V<V<120,00V	118,2V	
	AH_OUT9	117,00V<V<120,00V	118,2V	
	AH_OUT10	117,00V<V<120,00V	118,2V	
	AH_OUT11	117,00V<V<120,00V	118,2V	
	AO_CCEB	117,00V<V<120,00V	118,8V	
3B-B.55	Set OFF the command All Outlets ON/OFF in commanding column and click on relative "W"	OK	OK	
3B-B.56	Insert an amperometer in series with outlet 12	OK	OK	
3B-B.57	Set "ON" in the window "O_12:AO_CCEB" and push the relative "W" command	OK	OK	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3B-B.58	Verify from amperometer outlet 12 current absorption	3.55A±0,20A	3,55A	Iout12
3B-B.59	Push on Read All button in Analog Readout column	OK	OK	
3B-B.60	Take note of the following values in "Analog readout" column: O_12 Current: AO_CCEB	Iout12±0,45A	3,47A	CAN BUS_31
3B-B.61	Set the CAN BUS board address to 30	30	30	
3B-B.62	Select "CAN BUS I/F Side" to A	A	A	
3B-B.63	Push on Read All button in Analog Readout column	OK	OK	
3B-B.64	Take note of the following values in "Analog readout" column: O_12 Current: AO_CCEB	Iout12±0,45A	3,48A	CAN BUS_30
3B-B.65	Set "OFF" in the window "O_12:AO_CCEB" and push the relative "W" command	OK	OK	
3B-B.66	Disconnect out 2 cables	OK	OK	
3B-B.67	Connect load 2 in parallel to outlet 12	OK	OK	
3B-B.68	Set "ON" in the window "O_12:AO_CCEB" and push the relative "W" command	OK	OK	
3B-B.69	Verify from amperometer outlet 12 current absorption	6.75A±0,20A	6,75A	Iout12
3B-B.70	Push on Read All button in Analog Readout column	OK	OK	
3B-B.71	Take note of the following values in "Analog readout" column: O_12 Current: AO_CCEB	Iout12±0,45A	6,72A	CAN BUS_30
3B-B.72	Set the CAN BUS board address to 31	31	31	
3B-B.73	Select "CAN BUS I/F Side" to B	B	B	
3B-B.74	Push on Read All button in Analog Readout column	OK	OK	
3B-B.75	Take note of the following values in "Analog readout" column: O_12 Current: AO_CCEB	Iout12±0,45A	6,74A	CAN BUS_31
3B-B.76	Set "OFF" in the window "O_12:AO_CCEB" and push the relative "W" command	OK	OK	
3B-B.77	Disconnect outlet 5 cables	OK	OK	
3B-B.78	Connect load 5 in parallel to outlet 12 and 2	OK	OK	
3B-B.79	Set "ON" in the window "O_12:AO_CCEB" and push the relative "W" command	OK	OK	
3B-B.80	Verify from amperometer outlet 12 current absorption	9.05A±0,20A	9,11A	Iout12
3B-B.81	Push on Read All button in Analog Readout column	OK	OK	
3B-B.82	Take note of the following values in "Analog readout" column: O_12 Current: AO_CCEB	Iout12±0,45A	9,11A	CAN BUS_31
3B-B.83	Set the CAN BUS board address to 30	30	30	
3B-B.84	Select "CAN BUS I/F Side" to A	A	A	
3B-B.85	Push on Read All button in Analog Readout column	OK	OK	
3B-B.86	Take note of the following values in "Analog readout" column: O_12 Current: AO_CCEB	Iout12±0,45A	9,13A	CAN BUS_30
3B-B.87	Set "OFF" in the window "O_12:AO_CCEB" and push the relative "W" command	OK	OK	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3B-B.88	Set the CAN BUS board address to 31	31	31	
3B-B.89	Select "CAN BUS I/F Side" to B	B	B	
3B-B.90	Disconnect out 12 from out 2 and 5	OK	OK	
3B-B.91	Connect outlet 2 cables	OK	OK	
3B-B.92	Connect out 5 cales	OK	OK	
3B-B.93	Disconnect the amperometer	OK	OK	
3B-B.94	Connect the short circuit simulator in parallel to outlet 12	OK	OK	
3B-B.95	Set the short circuit simulator to 3ms short circuit duration	OK	OK	
3B-B.96	Monitor the short circuit current with a current probe (Ch1 of oscilloscope) Monitor the 120V of a different outlet of Esem3B under test (Ch2 of oscilloscope)	OK	OK	
3B-B.97	Set ON the command All Outlets ON/OFF in commanding column and click on relative "W"	OK	OK	
3B-B.98	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.99	Verify the status of the following flags: BOARD STATUS	OK	OK	
3B-B.100	Create the short circuit	OK	OK	
3B-B.101	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.102	Verify the status of the following flags: BOARD STATUS	OK	OK	
3B-B.103	Set the short circuit simulator to 15ms short circuit duration	OK	OK	
3B-B.104	Create the short circuit	OK	OK	
3B-B.105	Make an hardcopy of oscilloscope monitor	OK	OK	Add Annex_ 66 in the end of document
3B-B.106	Measure in the previous figure the current limitation value	13,00A±10%	12,67A	
3B-B.107	Measure in the previous figure the current limitation time	5ms<T<10ms	6,42ms	
3B-B.108	Verify with multimeter the absence of voltage on outlet 12	0,00V<V<5,00V	0,01V	
3B-B.109	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.110	Verify the status of the following flags: BOARD STATUS OVT Alarm From O__1 Status: AH_OUT1 to O_11 Status: AH_OUT11 O_12 Status: AO_CCEB O_12 Trip: AO_CCEB	NOK OK ON ON OFF TRIP	NOK OK ON ON OFF TRIP	
3B-B.111	Set the CAN BUS board address to 30	30	30	
3B-B.112	Select "CAN BUS I/F Side" to A	A	A	
3B-B.113	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.114	Verify the status of the following flags: BOARD STATUS OVT Alarm	NOK OK ON	NOK OK ON	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	From O__1 Status: AH_OUT1 to O_11 Status: AH_OUT11 O_12 Status: AO_CCEB O_12 Trip: AO_CCEB	ON OFF TRIP	ON OFF TRIP	
3B-B.115	Set the CAN BUS board address to 31	31	31	
3B-B.116	Select "CAN BUS I/F Side" to B	B	B	
3B-B.117	Disconnect short circuit simulator	OK	OK	
3B-B.118	Set OFF the command O_12:AO_CCEB in commanding column and click on relative "W"	OK	OK	Protection reset
3B-B.119	Set ON the command O_12:AO_CCEB in commanding column and click on relative "W"	OK	OK	
3B-B.120	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.121	Verify the status of the following flags: BOARD STATUS O_12 Status: AO_CCEB O_12 Trip: AO_CCEB	OK ON OK	OK ON OK	
3B-B.122	Set the CAN BUS board address to 30	30	30	
3B-B.123	Select "CAN BUS I/F Side" to A	A	A	
3B-B.124	Click on the command READ ALL under the column Digital Readout	OK	OK	
3B-B.125	Verify the status of the following flags: BOARD STATUS O_12 Status: AO_CCEB O_12 Trip: AO_CCEB	OK ON OK	OK ON OK	
3B-B.126	Set the CAN BUS board address to 31	31	31	
3B-B.127	Select "CAN BUS I/F Side" to B	B	B	
3B-B.128	Set OFF the command All Outlets ON/OFF in commanding column and click on relative "W"	OK	OK	
3B-B.129	Switch OFF main power bus	OK	OK	
3B-B.130	Disconnect current probe	OK	OK	
3B-B.131	Switch OFF the "power switch "of "power switch box"	Switch OFF	Switch OFF	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.6 SIDE B TELEMETRY VERIFICATION

10.3.2.6.1 ESEM3A CURRENT MONITORS

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
CM-B.1	Set all ESEM 3-A loads to 0A current absorption	OK	OK	
CM-B.2	Connect BI_120V and BI_120V_RTN power supply signals	OK	OK	
CM-B.3	Verify that all the cables of the section are connected	OK	OK	
CM-B.4	Launch the PDS controller software	Program open	Program open	
CM-B.5	Set to "FM" the window Model	OK	OK	
CM-B.6	Select "PDS Side" to B	B	B	
CM-B.7	Set the CAN BUS board address to 31	31	31	
CM-B.8	Select JMDC = 0	0	0	
CM-B.9	Select TX = A	A	A	
CM-B.10	Select RX = A	A	A	
CM-B.11	Select "CAN BUS I/F Side" to B	B	B	
CM-B.12	Set input bus voltage to 120V	120V±1V	120V	
CM-B.13	Set input bus current limitation to 27,5 A	27,5 A±1A	27,5 A	
CM-B.14	Enable power supply output	enabled	enabled	
CM-B.15	Verify that green led of "power switch box" is lighted	Green led ligthed	Green led ligthed	
CM-B.16	Switch ON the "power switch "of "power switch box"	Switch ON	Switch ON	
CM-B.17	Verify that red led of "power switch box" is lighted	Red led ligthed	Red led ligthed	
CM-B.18	Take note of power supply output current	1,1A±0,5A	1,1A	
CM-B.19	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
CM-B.20	Set the CAN BUS board address to 30	30	30	
CM-B.21	Select "CAN BUS I/F Side" to A	A	A	
CM-B.22	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
CM-B.23	Click on PB2-1 button	OK	OK	Button localed on left side of software window
CM-B.24	Verify that PB2-1 is ON	OK	OK	If PB2-1 is off switch it ON by remote
CM-B.25	**ESEM 3A-1 verification**			
CM-B.26	Click on ESEM3A-1 button	OK	OK	Button located on left side of software window
CM-B.27	Verify that loads are set to 0A current absorption	OK	OK	
CM-B.28	Press button "READ" to verify all board status	Command execute OK	Command execute OK	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
CM-B.29	Verify the status of the flags indicated on "Sta" column. All flags must be "OK"	OK	OK	Click on READ command under Sta column This column resumes the status of al the boards
CM-B.30	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
CM-B.31	Fill the table at the end of paragraph using a multimeter in series to relevant load to set the load	OK	OK	
CM-B.32	To read telemetries change from CAN BUS 30 to CAN BUS 31 using the following parameters: *CAN BUS 30 verification* Set the CAN BUS board address to 30 Select "CAN BUS I/F Side" to A *CAN BUS 31 verification* Set the CAN BUS board address to 31 Select "CAN BUS I/F Side" to B	OK	OK	
CM-B.33	Updating the relevant table at the end of paragraph verify that Iload-Itlm is lower than 0,225A	OK (Itlm±0,225 A)	OK	Verify that all telemetries are in line with tolerance
CM-B.34	Set outlet 1 to 0A current absorption	OK	OK	
CM-B.35	Disconnect the amperometer	OK	OK	
CM-B.36	Reconnect load	OK	OK	Load remains set to 0A current absorption
CM-B.37	Repeat the last 6 steps for outlet 2 , 3 , 4 , 5, 6, 7, 8	OK	OK	For outlet 8 current setting are different (see table)
CM-B.38	Click on PB2-2 button	OK	OK	Button located on left side of software window
CM-B.39	Set ON on DCDC OFF/ON command window and send the command	OK	OK	Power cell ON
CM-B.40	**ESEM 3A-2 verification**			
CM-B.41	Click on ESEM3A-2 button	OK	OK	Button located on left side of software window
CM-B.42	Verify that loads are set to 0A current absorption	OK	OK	
CM-B.43	Press button "READ" to verify all board status	Command execute OK	Command execute OK	
CM-B.44	Verify the status of the flags indicated on "Sta" column. All flags must be "OK"	OK	OK	Click on READ command under Sta column This column resumes the status of al the boards
CM-B.45	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
CM-B.46	Fill the table at the end of paragraph using a multimeter in series to relevant load to set the load	OK	OK	

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
CM-B.47	To read telemetries change from CAN BUS 30 to CAN BUS 31 using the following parameters: *CAN BUS 30 verification* Set the CAN BUS board address to 30 Select "CAN BUS I/F Side" to A *CAN BUS 31 verification* Set the CAN BUS board address to 31 Select "CAN BUS I/F Side" to B	OK	OK	
CM-B.48	Using the table at the end of paragraph verify that Iload-Itlm is lower than 0,225A	OK (Itlm±0,225 A)	OK	Verify that all telemetries are in line with tolerance
CM-B.49	Set outlet 1 to 0A current absorption	OK	OK	
CM-B.50	Disconnect the amperometer	OK	OK	
CM-B.51	Reconnect load	OK	OK	Load remains set to 0A current absorption
CM-B.52	Repeat the last 6 steps for outlet 2 , 3 , 4 , 5, 6, 7, 8	OK	OK	For outlet 8 current setting are different (see table)
CM-B.53	Click on PB2-3 button	OK	OK	Button located on left side of software window
CM-B.54	Set 0 on DCDC OFF/ON command window and send the command	OK	OK	Power cell ON
CM-B.55	**ESEM 3A-3 verification**			
CM-B.56	Click on ESEM3A-3 button	OK	OK	Button located on left side of software window
CM-B.57	Verify that loads are set to 0A current absorption	OK	OK	
CM-B.58	Press button "READ" to verify all board status	Command execute OK	Command execute OK	
CM-B.59	Verify the status of the flags indicated on "Sta" column. All flags must be "OK"	OK	OK	Click on READ command under Sta column This column resumes the status of al the boards
CM-B.60	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
CM-B.61	Fill the table at the end of paragraph using a multimeter in series to relevant load to set the load	OK	OK	
CM-B.62	To read telemetries change from CAN BUS 30 to CAN BUS 31 using the following parameters: *CAN BUS 30 verification* Set the CAN BUS board address to 30 Select "CAN BUS I/F Side" to A *CAN BUS 31 verification* Set the CAN BUS board address to 31 Select "CAN BUS I/F Side" to B	OK	OK	
CM-B.63	Using the table at the end of paragraph verify that Iload-Itlm is lower than 0,225A	OK (Itlm±0,225 A)	OK	Verify that all telemetries are in line with tolerance

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
CM-B.64	Set outlet 1 to 0A current absorption	OK	OK	
CM-B.65	Disconnect the amperometer	OK	OK	
CM-B.66	Reconnect load	OK	OK	Load remains set to 0A current absorption
CM-B.67	Repeat the last 6 steps for outlet 2 , 3 , 4 , 5, 6, 7, 8	OK	OK	For outlet 8 current setting are different (see table)
CM-B.68	Click on PB2-4 button	OK	OK	Button located on left side of software window
CM-B.69	Verify that PB2-4 is ON	OK	OK	If PB2-4 is off switch it ON by remote
CM-B.70	**ESEM 3A-4 verification**			
CM-B.71	Click on ESEM3A-4 button	OK	OK	Button located on left side of software window
CM-B.72	Verify that loads are set to 0A current absorption	OK	OK	
CM-B.73	Press button "READ" to verify all board status	Command execute OK	Command execute OK	
CM-B.74	Verify the status of the flags indicated on "Sta" column. All flags must be "OK"	OK	OK	Click on READ command under Sta column This column resumes the status of al the boards
CM-B.75	Set ON in All outlets ON/OFF command and push on the relative "W" command	OK	OK	
CM-B.76	Fill the table at the end of paragraph using a multimeter in series to relevant load to set the load	OK	OK	
CM-B.77	To read telemetries change from CAN BUS 30 to CAN BUS 31 using the following parameters: *CAN BUS 30 verification* Set the CAN BUS board address to 30 Select "CAN BUS I/F Side" to A *CAN BUS 31 verification* Set the CAN BUS board address to 31 Select "CAN BUS I/F Side" to B	OK	OK	
CM-B.78	Using the table at the end of paragraph verify that Iload-Itlm is lower than 0,225A	OK (Itlm±0,225 A)	OK	Verify that all telemetries are in line with tolerance
CM-B.79	Set outlet 1 to 0A current absorption	OK	OK	
CM-B.80	Disconnect the amperometer	OK	OK	
CM-B.81	Reconnect load	OK	OK	Load remains set to 0A current absorption
CM-B.82	Repeat the last 6 steps for outlet 2 , 3 , 4 , 5, 6, 7, 8	OK	OK	For outlet 8 current setting are different (see table)
CM-B.83	Switch OFF the "power switch "of "power switch box"	Switch OFF	Switch OFF	

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS

Side B ESEM 3-A-1 current monitors

	OUT 1		OUT 2		OUT 3		OUT 4		OUT 5		OUT 6		OUT 7		OUT 8	
	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31
Iload 0A [A]	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002
Itel 0A [A]	0,004	0,004	0,004	0,004	-0,005	-0,003	0,003	0,005	0,003	0,002	0,005	0,003	-0,003	0,003	0,013	0,010
Iload 0A - Itel 0A < ±0.225A (OK / NOT OK)	-0,002	-0,002	-0,002	-0,002	0,007	0,005	-0,001	-0,003	-0,001	0,000	-0,003	-0,001	0,005	-0,001	-0,011	-0,008
Iload 3A [A] Iload 5A [A] for outlet8	2,999	2,998	3,000	3,000	3,001	3,001	3,000	3,000	3,003	3,003	3,001	3,001	3,003	3,003	5,004	5,004
Itel 3A [A] Itel 5A [A] for outlet8	3,002	2,989	2,999	2,989	2,998	3,010	3,008	3,006	2,980	2,997	2,988	3,007	2,991	3,010	5,000	5,007
Iload 3A - Itel 3A < ±0,225A (OK / NOT OK) Iload 5A - Itel 5A < ±0,225A (OK / NOT OK) for outlet 8	-0,003	0,009	0,001	0,011	0,003	-0,009	-0,008	-0,006	0,023	0,006	0,013	-0,006	0,012	-0,007	0,004	-0,003
Iload 5A [A] Iload 10A [A] for outlet8	5,000	5,000	5,002	5,002	4,998	4,998	5,000	5,000	4,999	4,999	4,998	4,998	5,000	5,000	10,00	10,00
Itel 5A [A] Iload 10A [A] for outlet8	4,996	5,003	5,010	4,991	4,995	5,013	4,995	4,990	5,004	5,011	5,002	4,993	5,003	4,997	10,03	10,01
Iload 5A - Itel 5A < ±0,225A (OK / NOT OK) Iload 10A - Itel 10A < ±0,225A (OK / NOT OK) for outlet 8	0,004	-0,003	-0,008	0,011	0,003	-0,015	0,005	0,010	-0,005	-0,012	-0,004	0,005	-0,003	0,003	-0,030	-0,010

Tab. 10: Side B ESEM 3-A-1 current monitors

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS

Side B ESEM 3-A-2 current monitors

	OUT 1		OUT 2		OUT 3		OUT 4		OUT 5		OUT 6		OUT 7		OUT 8	
	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31
Iload 0A [A]	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002
Itel 0A [A]	0,004	-0,005	0,003	0,006	-0,004	0,006	-0,002	0,030	0,007	-0,005	0,003	0,084	0,006	-0,002	0,005	0,008
Iload 0A - Itel 0A < ±0,225A (OK / NOT OK)	-0,002	0,007	-0,001	-0,004	0,006	-0,004	0,004	-0,028	-0,005	0,007	-0,001	-0,082	-0,004	0,004	-0,003	-0,006
Iload 3A [A] Iload 5A [A] for outlet8	2,997	2,997	3,000	3,000	2,998	2,998	3,000	3,000	3,005	3,005	3,002	3,002	3,002	3,002	5,000	5,000
Itel 3A [A] Itel 5A [A] for outlet8	2,995	3,003	2,989	3,100	2,997	3,000	2,998	3,090	2,988	2,998	3,014	3,098	3,002	3,009	5,023	5,004
Iload 3A - Itel 3A < ±0,225A (OK / NOT OK) Iload 5A - Itel 5A < ±0,225A (OK / NOT OK) for outlet 8	0,002	-0,006	0,011	-0,100	0,001	-0,002	0,002	-0,090	0,017	0,007	-0,012	-0,096	0,000	-0,007	-0,023	-0,004
Iload 5A [A] Iload 10A [A] for outlet8	5,000	5,000	5,000	5,000	5,004	5,004	5,003	5,003	5,003	5,003	4,999	4,999	4,999	4,999	10,00	10,00
Itel 5A [A] Iload 10A [A] for outlet8	5,016	4,995	5,007	5,104	4,996	5,006	5,015	5,065	4,995	4,990	5,008	5,103	5,010	5,005	10,03	10,01
Iload 5A - Itel 5A < ±0,225A (OK / NOT OK) Iload 10A - Itel 10A < ±0,225A (OK / NOT OK) for outlet 8	-0,016	0,005	-0,007	-0,104	0,008	-0,002	-0,012	-0,062	0,008	0,013	-0,009	-0,104	-0,011	-0,006	-0,030	-0,010

Tab. 11: Side B ESEM 3-A-2 current monitors

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS

Side B ESEM 3-A-3 current monitors

	OUT 1		OUT 2		OUT 3		OUT 4		OUT 5		OUT 6		OUT 7		OUT 8	
	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31
Iload 0A [A]	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002
Itel 0A [A]	-0,010	0,004	0,016	0,010	-0,020	0,013	0,008	0,018	0,019	0,015	0,025	0,004	0,024	0,036	-0,036	0,010
Iload 0A - Itel 0A < ±0,225A (OK / NOT OK)	0,012	-0,002	-0,014	-0,008	0,022	-0,011	-0,006	-0,016	-0,017	-0,013	-0,023	-0,002	-0,022	-0,034	0,038	-0,008
Iload 3A [A] Iload 5A [A] for outlet8	3,003	3,003	2,996	2,996	3,000	3,000	3,028	3,003	2,995	2,995	3,000	3,000	3,004	3,004	5,008	5,008
Itel 3A [A] Itel 5A [A] for outlet8	3,007	3,011	2,990	3,009	3,018	3,010	2,989	3,016	3,005	3,010	3,018	3,010	3,017	2,986	4,997	5,015
Iload 3A - Itel 3A < ±0,225A (OK / NOT OK) Iload 5A - Itel 5A < ±0,225A (OK / NOT OK) for outlet 8	-0,004	-0,008	0,006	-0,013	-0,018	-0,010	0,039	-0,013	-0,010	-0,015	-0,018	-0,010	-0,013	0,018	0,011	-0,007
Iload 5A [A] Iload 10A [A] for outlet8	5,002	5,002	4,999	4,999	5,004	5,004	5,004	5,004	5,004	5,004	5,000	5,000	4,998	4,998	9,99	9,99
Itel 5A [A] Iload 10A [A] for outlet8	5,011	5,012	4,996	5,012	4,997	5,023	5,012	4,988	5,014	5,011	5,018	5,010	4,976	5,006	9,96	10,04
Iload 5A - Itel 5A < ±0,225A (OK / NOT OK) Iload 10A - Itel 10A < ±0,225A (OK / NOT OK) for outlet 8	-0,009	-0,010	0,003	-0,013	0,007	-0,019	-0,008	0,016	-0,010	-0,007	-0,018	-0,010	0,022	-0,008	0,030	-0,050

Tab. 12: Side B ESEM 3-A-3 current monitors

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS

Side B ESEM 3-A-4 current monitors

	OUT 1		OUT 2		OUT 3		OUT 4		OUT 5		OUT 6		OUT 7		OUT 8	
	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31
Iload 0A [A]	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002	0,002
Itel 0A [A]	0,006	0,002	0,012	-0,008	0,002	0,012	0,016	0,023	-0,007	0,012	0,016	-0,012	0,013	0,024	0,024	0,016
Iload 0A - Itel 0A < ±0,225A (OK / NOT OK)	-0,004	0,000	-0,010	0,010	0,000	-0,010	-0,014	-0,021	0,009	-0,010	-0,014	0,014	-0,011	-0,022	-0,022	-0,014
Iload 3A [A] Iload 5A [A] for outlet8	3,002	3,002	3,003	3,003	3,000	3,000	3,004	3,004	3,003	3,003	3,004	3,004	3,000	3,000	4,996	4,996
Itel 3A [A] Itel 5A [A] for outlet8	2,996	3,001	3,040	3,023	3,005	3,011	3,020	2,972	2,991	2,998	3,011	3,008	3,022	3,009	5,002	5,017
Iload 3A - Itel 3A < ±0,225A (OK / NOT OK) Iload 5A - Itel 5A < ±0,225A (OK / NOT OK) for outlet 8	0,006	0,001	-0,037	-0,020	-0,005	-0,011	-0,016	0,032	0,012	0,005	-0,007	-0,004	-0,022	-0,009	-0,006	-0,021
Iload 5A [A] Iload 10A [A] for outlet8	5,003	5,003	4,998	4,998	5,000	5,000	5,001	5,001	5,002	5,002	5,008	5,008	5,000	5,000	10,00	10,00
Itel 5A [A] Iload 10A [A] for outlet8	5,003	5,027	5,009	4,997	4,999	5,015	4,990	4,970	5,024	4,979	5,006	5,016	5,010	4,999	9,97	9,99
Iload 5A - Itel 5A < ±0,225A (OK / NOT OK) Iload 10A - Itel 10A < ±0,225A (OK / NOT OK) for outlet 8	0,000	-0,024	-0,011	0,001	0,001	-0,015	0,011	0,031	-0,022	0,023	0,002	-0,008	-0,010	0,001	0,030	0,010

Tab. 13: Side B ESEM 3-A-4 current monitors

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.6.2 INPUT STAGE CURRENT MONITOR

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
IBUS-B.1	Connect all the ESEM3B loads. The following column resumes the currents (with Main bus equal to 120V):	OK	OK	There is no need to check the current absorption of the loads. CCS load not connected

OUTLET	CURRENT [A] SET
1	1,200±100mA
2	3,200±100mA
3	1,200±100mA
4	1,200±100mA
5	2,400±100mA
6	1,200±100mA
7	1,200±100mA
8	1,200±100mA
9	1,200±100mA
10	1,200±100mA
11	1,200±100mA
12	3,520±100mA

IBUS-B.2	Set all the loads of the other boards to 0A	OK	OK	
IBUS-B.3	Set power supply voltage to 120V	120V ± 0.2V	120,00V	
IBUS-B.4	Set power supply current limitation to 27.5A	27.5A±0.5A	27,5 A	
IBUS-B.5	Switch ON the **"power switch "of "power switch box"**	OK	OK	
IBUS-B.6	Take note of input current	7,9A±0,5A	7,8 A	
IBUS-B.7	Select PDS controller software	program open	program open	
IBUS-B.8	Set the CAN BUS board address to 31	31	31	
IBUS-B.9	Select JMDC = 0	0	0	
IBUS-B.10	Select TX = A	A	A	
IBUS-B.11	Select RX = A	A	A	
IBUS-B.12	Select "CAN BUS I/F Side" to B	B	B	
IBUS-B.13	Select "PDS Side" to B	B	B	
IBUS-B.14	Click on Run flash command	OK	OK	
IBUS-B.15	Set the CAN BUS board address to 30	30	30	
IBUS-B.16	Select "CAN BUS I/F Side" to A	A	A	
IBUS-B.17	Click on Run flash command	OK	OK	
IBUS-B.18	Set the CAN BUS board address to 31	31	31	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
IBUS-B.19	Select "CAN BUS I/F Side" to B	B	B	
IBUS-B.20	Click on ESEM3-B button	OK	OK	Button located on left side of PDS controller software window
IBUS-B.21	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT Alarm	OK	OK	
	O__1 CMD: AH_OUT1	ON	ON	
	O__2 CMD: AH_OUT2	ON	ON	
	O__3 CMD: AH_OUT3	ON	ON	
	O__4 CMD: AH_OUT4	OFF	OFF	
	O__5 CMD: AH_OUT5	OFF	OFF	
	O__6 CMD: AH_OUT6	ON	ON	
	O__7 CMD: AH_OUT7	OFF	OFF	
	O__8 CMD: AH_OUT8	OFF	OFF	
	O__9 CMD: AH_OUT9	OFF	OFF	
	O_10 CMD: AH_OUT10	OFF	OFF	
	O_11 CMD: AH_OUT11	OFF	OFF	
	O_12 CMD: AO_CCEB	OFF	OFF	
	O__1 Status: AH_OUT1	ON	ON	
	O__2 Status: AH_OUT2	ON	ON	
	O__3 Status: AH_OUT3	ON	ON	
	O__4 Status: AH_OUT4	OFF	OFF	
	O__5 Status : AH_OUT5	OFF	OFF	
	O__6 Status: AH_OUT6	ON	ON	
	O__7 Status: AH_OUT7	OFF	OFF	
	O__8 Status: AH_OUT8	OFF	OFF	
	O__9 Status: AH_OUT9	OFF	OFF	
	O_10 Status: AH_OUT10	OFF	OFF	
	O_11 Status: AH_OUT11	OFF	OFF	
	O_12 Status: AO_CCEB	OFF	OFF	
	O_12 Trip: AO_CCEB	OK	OK	
IBUS-B.22	Push on Read All button in Analog Readout column	OK	OK	
IBUS-B.23	Take note of the following values in "Analog readout" column:			
	Temperature	-40°C<T<80C°	31,25°C	
	O_12 Current: AO_CCEB	0,00A±0,45A	0,15 A	
	Analog Ref. 2.5V	2,500V±150mV	2,49 mV	
IBUS-B.24	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
IBUS-B.25	Take note of input current	1.1A±0.2A	1,1 A	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
IBUS-B.26	Click on the command READ ALL under the column Digital Readout	OK	OK	
IBUS-B.27	Verify the status of the following flags: BOARD STATUS OVT Alarm From O__1 CMD: AH_OUT1 to O_11 CMD: AH_OUT11 O_12 CMD: AO_CCEB From O__1 Status: AH_OUT1 to O_11 Status: AH_OUT11 O_12 Status: AO_CCEB O_12 Trip: AO_CCEB	 OK OK OFF OFF OFF OFF OK	 OK OK OFF OFF OFF OFF OK	
IBUS-B.28	Fill the table at the end of paragraph	OK	OK	
IBUS-B.29	To switch ON the loads Set "ON" in the window "O_x: AH_OUTx" and push the relative "W" command	OK	OK	
IBUS-B.30	To read telemetries change from CAN BUS 30 to CAN BUS 31 using the following parameters: *CAN BUS 30 verification* Set the CAN BUS board address to 30 Select "CAN BUS I/F Side" to A *CAN BUS 31 verification* Set the CAN BUS board address to 31 Select "CAN BUS I/F Side" to B	OK	OK	
IBUS-B.31	Using the table at the end of paragraph verify that Iload-Itlm is lower than 7,6A	OK	OK	Verify that all telemetries are in line with tolerance 20% F.S. see RFW PDS-WV-CGS-002
IBUS-B.32	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
IBUS-B.33	Switch OFF the "power switch "of "power switch box"	Switch OFF	Switch OFF	
IBUS-B.34	Disconnect all Loads	OK	OK	

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Side B Input Stage - current monitors

	INPUT STAGE	
	CAN BUS 30	CAN BUS 31
Iload ~1,1A [A] – Loads OFF	1,38	1,38
Itlm ~1,1A [A] – Loads OFF	0,20	-0,07
Itlm - Iload < 7,6A	-1,180	-1,450
Iload ~4,7A [A] – Switch ON out 1, 5	4,80	4,80
Itlm ~4,7A [A] – Switch ON out 1, 5	4,24	4,00
Itlm - Iload < 7,6A	-0,560	-0,800
Iload ~10,3A [A] – Switch ON out 2, 3 ,4	10,12	10,12
Itlm ~10,3A [A] – Switch ON out 2, 3, 4	9,85	9,53
Itlm - Iload < 7,6A	-0,270	-0,590
Iload ~15,1A [A] – Switch ON out 6, 7, 8 ,9	14,60	14,60
Itlm ~15,1A [A] – Switch ON out 6, 7, 8 ,9	14,60	14,19
Itlm - Iload < 7,6A	0,000	-0,410
Iload ~21,1A [A] – Switch ON out 10, 11, 12	20,2	20,2
Itlm ~21,1A [A] – Switch ON out 10, 11, 12	20,11	19,60
Itlm - Iload < 7,6A	-0,090	-0,600

Tab. 14: Side B Input Stage current monitors

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.6.3 INPUT STAGE – ESEM1A TELEMETRY

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
VBUS-B.1	Connect main power supply between BI_120V (positive) and BI_120V_RTN (negative)	J100 connected	J100 connected	
VBUS-B.2	Set Power supply alim to 120V	120,00V±1,00V	120,00V	
VBUS-B.3	Set output current limitation to 3A	3A±0,5A	3A	
VBUS-B.4	Enable power supply output	enabled	enabled	
VBUS-B.5	Verify that green led of **"power switch box"** is lighted	Green led ligthed	Green led ligthed	
VBUS-B.6	Switch ON the **"power switch "of "power switch box"**	Switch ON	Switch ON	
VBUS-B.7	Verify that red led of **"power switch box"** is lighted	Red led ligthed	Red led ligthed	
VBUS-B.8	Verify the current absorption from Main Bus	1,10A±0,20A	1,10A	Note: this current can be read from power supply display or amperometer. In case of power supply reading, verify the correctness of measurements.
VBUS-B.9	Select PDS controller software	program open	program open	
VBUS-B.10	Set the CAN BUS board address to 30	30	30	
VBUS-B.11	Select JMDC = 0	0	0	
VBUS-B.12	Select TX = A	A	A	
VBUS-B.13	Select RX = A	A	A	
VBUS-B.14	Select "CAN BUS I/F Side" to A	A	A	
VBUS-B.15	Select "PDS Side" to A	A	A	
VBUS-B.16	Click on Run flash command	OK	OK	
VBUS-B.17	Set the CAN BUS board address to 31	31	31	
VBUS-B.18	Select "CAN BUS I/F Side" to B	B	B	
VBUS-B.19	Click on Run flash command	OK	OK	
VBUS-B.20	Set the CAN BUS board address to 30	30	30	
VBUS-B.21	Select "CAN BUS I/F Side" to A	A	A	
VBUS-B.22	Fill the table at the end of paragraph	OK	OK	
VBUS-B.23	Connect a multimeter between PIN "bypass thermal interlock" (positive) and "PRI_GND"(negative) on side A of the J300 test box	OK	OK	
VBUS-B.24	To set the Voltage value use the multimeter connected on J300 test box	OK	OK	
VBUS-B.25	To read the telemetry of the ESEM1A board *Click on ESEM1A button and Press button "READ"*	OK	OK	Button located on left side of software window
VBUS-B.26	To read the telemetry of the INPUT STAGE *Click on button "READ" relevant to INPUT STAGE*	OK	OK	Button located on left side of software window
VBUS-B.27	To read telemetries change from CAN BUS 30 to CAN BUS 31 using the following parameters: *CAN BUS 30 verification*	OK	OK	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	Set the CAN BUS board address to 30 Select "CAN BUS I/F Side" to A *CAN BUS 31 verification* Set the CAN BUS board address to 31 Select "CAN BUS I/F Side" to B			
VBUS-B.28	Using the table at the end of paragraph verify that Iload-Itlm is lower than 9.5V	OK	OK	Verify that all telemetries are in line with tolerance 5% F.S.
VBUS-B.29	Switch OFF main power bus	OK	OK	
VBUS-B.30	Switch OFF the "power switch "of "power switch box"	Switch OFF	Switch OFF	

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Side B Input Stage – Esem1A telemetry

	INPUT STAGE		ESEM1A	
	CAN BUS 30	CAN BUS 31	CAN BUS 30	CAN BUS 31
Vbus 90V [V]	90,18	90,18	90,18	90,18
Vtel 90 [V]	91,21	93,61	91,50	89,60
Vtlm - Vbus < 9,5V	1,030	3,430	1,320	-0,580
Vbus 110V [V]	110,44	110,44	110,44	110,44
Vtel 110 [V]	112,3	113,6	111,5	109,3
Vtlm - Vbus < 9,5V	1,860	3,160	1,060	-1,140
Vbus 120V [V]	120,0	120,0	120,0	120,0
Vtel 120 [V]	122,6	124,5	121,00	120,0
Vtlm - Vbus < 9,5V	2,600	4,500	1,000	0,000
Vbus 130V [V]	130,63	130,63	130,63	130,63
Vtel 130 [V]	132,4	133,6	131,3	129,8
Vtlm - Vbus < 9,5V	1,770	2,970	0,670	-0,830
Vbus 145V [V]	145,73	145,73	145,73	145,73
Vtel 145 [V]	147,5	149,5	146,3	145,0
Vtlm - Vbus < 9,5V	1,770	3,770	0,570	-0,730

Tab. 15: Side B Input Stage - ESEM 1-A telemetry

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.7 POWER VIDEO GRAPPLE FIXTURE 1 POWER CONSUMPTION VERIFICATION (2P)

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PVGF-B.1	Connect main power supply between 2P_120V (positive) and 2P_120V_RTN (negative)	Connected	Connected	
PVGF-B.2	Connect a Current Probe to the hot input power cable	Connected	Connected	
PVGF-B.3	Connect all the 7 PDS heaters lines: PDS HEATERS A Name / Ohm Heater_1 124,3 Heater_2 124,9 Heater_3 124,6 Heater_4 124,8 Heater_5 124,7 Heater_6 124,5 Heater_7 124,7	Connected	connected	The Heaters 1,2,3,6 are built in the relevant rack
PVGF-B.4	Connect the ESEM3B-1 output lines as follow: ESEM3B-1 Name / Status / Ohm Out 1 AH_(CRYO2) ON 100,90 Out 2 (AH_RAMMAIN) ON 37,50 Out 3 (AH_TRD) ON 101,20 Out 6 (AH_ZEN1) ON 100,90	Connected	Connected	The Heaters 1,2,3,6 are built in the relevant rack
PVGF-B.5	Connect an external passive load set to 184,0 Ohm in parallel to Out 2 line.	Connected	Connected 186,4 ohm	On Out 2 is mounted a Fuse of 7,5A
PVGF-B.6	Set Power supply alim to 126V	126,00V±1,00V	126V	
PVGF-B.7	Set output current limitation to 17.5A	17,5±0,5V	17,5 A	
PVGF-B.8	Select PDS controller software	OPEN	OPEN	

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PVGF-B.9	Set to "FM" the window Model	FM	FM	
PVGF-B.10	Set the CAN BUS board address to 31	30	30	
PVGF-B.11	Select "CAN BUS I/F Side" to B	A	A	
PVGF-B.12	Select "PDS Side" to B	A	A	
PVGF-B.13	select JMDC = 0	0	0	
PVGF-B.14	select TX = A	A	A	
PVGF-B.15	select RX = A	A	A	
PVGF-B.16	Enable power supply output	Enabled	Enable	
PVGF-B.17	Verify that green led of **"power switch box"** is lighted	Green led ligthed	Green	
PVGF-B.18	Switch ON the **"power switch "of "power switch box"**	Switch ON	ON	
PVGF-B.19	Verify that red led of **"power switch box"** is lighted	Red led ligthed	red	
PVGF-B.20	Measure the input current with current probe	15,5 ±0,5V	15,0 A	
PVGF-B.21	Press button "RUN Flash" and verify on the command status window	Command execute OK	Ok	
PVGF-B.22	Press button "READ" to verify all board status	Command execute OK	Ok	
PVGF-B.23	Set the following loads: PB2-1 +ESEM3A - 1 JPD_N ON 1,8A PB2-4 +ESEM3A - 4 JPD_R ON 1,8A	1,8A ±0,1V 1,8A ±0,1V	1,8 A 1,8 A	
PVGF-B.24	Measure the PDS input voltage: connect a multimeter between PIN "bypass thermal interlock" (positive) and "PRI_GND" (negative) on side A of the J300 test box	124V±1,00V	123,3 V	Power bus display = 126,1V

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PVGF-B.25	Measure (using a multimeter) the voltage at load level	Depending on cable lenght	123,0V 123,0V 123,0V 123,0V 123,0V 123,0V 123,0V 121,8V 121,7V 121,8V 121,8V 27,43V 27,56V	

PDS HEATERS A

Name	Ohm
Heater_1	124,3
Heater_2	124,9
Heater_3	124,6
Heater_4	124,8
Heater_5	124,7
Heater_6	124,5
Heater_7	124,7

ESEM3B-1

Name	Status	Ohm
Out 1 AH_(CRYO2)	ON	100,90
Out 2 (AH_RAMMAIN)	ON	37,50
Out 3 (AH_TRD)	ON	101,20
Out 6 (AH_ZEN1)	ON	100,90

PB2-1 +ESEM3A - 1		
JPD_N	ON	1,8A
PB2-4 +ESEM3A - 4		
JPD_R	ON	1,8A

PVGF-B.26	Verify the current absorption from Main Bus reading the current probe	Ibus ≤ 17,5 A	16,24 A	
PVGF-B.27	Switch OFF all ESEM3-B outlets	OK	OK	
PVGF-B.28	Switch OFF main power bus	OK	OK	
PVGF-B.29	Disconnect all the Heaters	OK	OK	
PVGF-B.30	Disconnect ESEM3-B loads	OK	OK	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.8 DISSIPATION MEASUREMENT

10.3.2.8.1 AMS02-PDS DISSIPATION 120V

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.1	Connect main power supply between BI_120V (positive) and BI_120V_RTN (negative)	OK	OK	
DISS-B.2	Verify that all the cables of the section are connected with the exception of all 120V loads	OK	OK	
DISS-B.3	Launch the PDS controller software	Program open	Program open	
DISS-B.4	Set to "FM" the window Model	OK	OK	
DISS-B.5	Select "PDS Side" to B	B	B	
DISS-B.6	Set the CAN BUS board address to 31	31	31	
DISS-B.7	Select JMDC = 0	0	0	
DISS-B.8	Select TX = A	A	A	
DISS-B.9	Select RX = A	A	A	
DISS-B.10	Select "CAN BUS I/F Side" to B	B	B	
DISS-B.11	Set input bus voltage to 122,5V	122,5V±0,2V	122,5V±0,2V	In order to have 120V at nominal configuration
DISS-B.12	Set input bus current limitation to 27,5A	27,5A±1A	27,5A±1A	For this measure all loads will be connected to nominal value
DISS-B.13	Enable power supply output	enabled	enabled	
DISS-B.14	Verify that green led of "power switch box" is lighted	Green led ligthed	Green led ligthed	
DISS-B.15	Switch ON the "power switch "of "power switch box"	Switch ON	Switch ON	
DISS-B.16	Verify that red led of "power switch box" is lighted	Red led ligthed	Red led ligthed	
DISS-B.17	Take note of power supply output current	1,1A±0,5A	1,1A	
DISS-B.18	Click on Run flash button	OK	OK	
DISS-B.19	Click ON **PB2-1** icon	OK	OK	
DISS-B.20	Set ON in DCDC OFF/ON window and send the command	OK	OK	
DISS-B.21	Click ON **ESEM3-A-1** icon	OK	OK	
DISS-B.22	Command ON the following outlets: OUT1 OUT2 OUT3 OUT4 OUT5 OUT7	ON	ON	
DISS-B.23	Using board telemetries regulate the current of following outputs: Iout1-1 Iout2-1	2,90A±100mA 2,90A±100mA	2,95 A 2,99 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	Iout3-1 Iout4-1 Iout5-1 Iout7-1	1,80A±100mA 1,50A±100mA 1,20A±100mA 2,90A±100mA	1,84 A 1,54 A 1,25 A 2,93 A	correct.
DISS-B.24	Click ON **PB2-2** icon	OK	OK	
DISS-B.25	Set ON in DCDC OFF/ON window and send the command	OK	OK	
DISS-B.26	Click ON **ESEM3-A-2** icon	OK	OK	
DISS-B.27	Command ON the following outlets: OUT1 OUT2 OUT3 OUT4 OUT5 OUT6 OUT7 OUT8	ON	ON	
DISS-B.28	Using board telemetries regulate the current of following outputs: Iout1-2 Iout2-2 Iout3-2 Iout4-2 Iout5-2 Iout6-2 Iout7-2 Iout8-2	3,40A±100mA 2,90A±100mA 2,90A±100mA 1,50A±100mA 1,80A±100mA 1,60A±100mA 1,50A±100mA 0,70A±100mA	3,45 A 2,92 A 2,99 A 1,59 A 1,73 A 1,70 A 1,60 A 0,80 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.29	Click ON **PB2-3** icon	OK	OK	
DISS-B.30	Set ON in DCDC OFF/ON window and send the command	OK	OK	
DISS-B.31	Click ON **ESEM3-A-3** icon	OK	OK	
DISS-B.32	Command ON the following outlets: OUT1 OUT2 OUT3 OUT8	ON	ON	
DISS-B.33	Using board telemetries regulate the current of following outputs: Iout1-3 Iout2-3 Iout3-3 Iout8-3	2,9A±100mA 2,9A±100mA 3,4A±100mA 2,6 A±100mA	2,95 A 2,99 A 3,50 A 2,65 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.

DATE: 25.06.09	TEST CONDUCTOR 2010	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.34	Click ON PB2-4 icon	OK	OK	
DISS-B.35	Set ON in DCDC OFF/ON window and send the command	OK	OK	
DISS-B.36	Click ON **ESEM3-A-4** icon	OK	OK	
DISS-B.37	Command ON the following outlets: OUT5 OUT6 OUT7 OUT8	ON	ON	
DISS-B.38	Using board telemetries regulate the current of following outputs: Iout5-4 Iout6-4 Iout7-4 Iout8-4	1,6A±100mA 1,5A±100mA 2,9A±100mA 4,8A±100mA	1,61 A 1,60 A 3,00 A 4,90 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.39	Click ON **ESEM 3-B** icon	OK	OK	
DISS-B.40	Insert an Amperometer in series to outlet 12	OK	OK	
DISS-B.41	Command ON the following outlets: OUT12	ON	ON	
DISS-B.42	Using board telemetries regulate the current of following outputs: Iout12	3,40A±100mA	3,49 A	Iout12 - Nominal value 3,80A @ 120V
DISS-B.43	Using a multimeter measure the output voltage of **ESEM3-B**: OUT12	117<Vout12<120V	119,3 V	
DISS-B.44	Calculate ESEM3-B output power: Pout_E3B = (Vout12* Iout12)	Pout_E3B	413,36W	
DISS-B.45	Push the command "Read input" located in the bottom left of the software window	OK	OK	
DISS-B.46	Take note of the value "I" indicated in Input Stage B window	16,00A<Iin<20,00A	17,27 A	
DISS-B.47	Measure the input current using current probe	16,00A<Iin<20,00A	17,50 A	Iin
DISS-B.48	Measure the Input voltage between PIN "bypass thermal interlock" (positive) and "PRI_GND"(negative) on side A of the J300 test box	120,0V±0,5V	120,5V	Vin
DISS-B.49	Calculate Pin=Vin*Iin	2100W±50W	2109,97 W	Pin

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.50	Calculate ESEM3-A-1 output power filling the table below:	Pout_3A_1 [W]	369,65W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT1-1	2,95	26,90	0,140	27,31	80,56
OUT2-1	2,99	26,89	0,140	27,31	81,66
OUT3-1	1,84	27,23	0,140	27,49	50,58
OUT4-1	1,54	27,27	0,129	27,47	42,30
OUT5-1	1,25	27,47	0,062	27,55	34,44
OUT7-1	2,93	27,05	0,098	27,34	80,11
Pout_3A_1					369,65

DISS-B.51	Calculate ESEM3-A-2 output power filling the table below:	Pout_3A_2 [W]	458,94W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT1-2	3,45	26,72	0,140	27,20	93,84
OUT2-2	2,92	26,91	0,140	27,32	79,77
OUT3-2	2,99	26,86	0,140	27,28	81,57
OUT4-2	1,59	27,25	0,129	27,46	43,66
OUT5-2	1,73	27,20	0,140	27,44	47,47
OUT6-2	1,70	27,24	0,129	27,46	46,68
OUT7-2	1,60	27,28	0,093	27,43	43,89
OUT8-2	0,80	27,55	0,026	27,57	22,06
Pout_3A_2					458,94

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.52	Calculate ESEM3-A-3 output power filling the table below::	Pout_3A_3 [W]	329,82W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT1-3	2,95	27,13	0,062	27,31	80,56
OUT2-1	2,99	27,12	0,062	27,31	81,66
OUT3-1	3,50	27,01	0,062	27,23	95,31
OUT8-1	2,65	27,21	0,026	27,28	72,29
Pout_3A_3					329,82

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.53	Calculate ESEM3-A-4 output power filling the table below::	Pout_3A_4 [W]	302,40W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained; -

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT5-3	1,61	27,31	0,129	27,52	44,31
OUT6-1	1,60	27,34	0,129	27,55	44,08
OUT7-1	3,00	27,07	0,093	27,35	82,05
OUT8-1	4,90	26,74	0,039	26,93	131,96
Pout_3A_4					302,40

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.54	Calculate the total ouput power updating the following table: Pout= Pout_E3B + Pout_3A_1 + Pout_3A_2 + Pout_3A_3 + Pout_3A_4	Pout [W]	1873,57W	

Pout_E3B	413,36
Pout_3A_1	369,65
Pout_3A_2	458,94
Pout_3A_3	329,22
Pout_3A_4	302,40
Pout	1873,57

DATE: 29.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.55	Calculate the total power dissipation: Pdiss=Pin-Pout Pin 2109,97 Pout 1873,57 Pds 236,40	Pdiss<333W	236,40W	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.2.8.2 AMS02-PDS DISSIPATION 113V

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.56	Set input bus voltage to 115,5V	115,5V±0,2V	115,5V	In order to have 113V at nominal configuration
DISS-B.57	Click ON ESEM3-A-1 icon	OK	OK	
DISS-B.58	Using board telemetries regulate the current of following outputs: Iout1-1 Iout2-1 Iout3-1 Iout4-1 Iout5-1 Iout7-1	 2,90A±100mA 2,90A±100mA 1,80A±100mA 1,50A±100mA 1,20A±100mA 2,90A±100mA	 2,94 A 2,96 A 1,86 A 1,55 A 1,21 A 2,90 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.59	Click ON ESEM3-A-2 icon	OK	OK	
DISS-B.60	Using board telemetries regulate the current of following outputs: Iout1-2 Iout2-2 Iout3-2 Iout4-2 Iout5-2 Iout6-2 Iout7-2 Iout8-2	 3,40A±100mA 2,90A±100mA 2,90A±100mA 1,50A±100mA 1,80A±100mA 1,60A±100mA 1,50A±100mA 0,70A±100mA	 3,43 A 2,91 A 2,97 A 1,6 A 1,71 A 1,7 A 1,60 A 0,80 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.61	Click ON ESEM3-A-3 icon	OK	OK	
DISS-B.62	Using board telemetries regulate the current of following outputs: Iout1-3 Iout2-3 Iout3-3 Iout8-3	 2,9A±100mA 2,9A±100mA 3,4A±100mA 2,6 A±100mA	 2,97 A 3,00 A 3,50 A 2,65 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.63	Click ON ESEM3-A-4 icon	OK	OK	
DISS-B.64	Using board telemetries regulate the current of following outputs: Iout5-4 Iout6-4 Iout7-4 Iout8-4	 1,6A±100mA 1,5A±100mA 2,9A±100mA 4,8A±100mA	 1,60 A 1,60 A 2,97 A 4,84 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.65	Click ON ESEM 3-B icon	OK	OK	
DISS-B.66	Insert an Amperometer in series to outlet 12	OK	OK	
DISS-B.67	Using board telemetries regulate the current of following outputs: Iout12	 3,20A±100mA	 3,29 A	Iout12 – Nominal value 3,80A @ 120V

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.68	Using a multimeter measure the output voltage of **ESEM3-B**: OUT12	112<Vout12<115V	112,10 V	
DISS-B.69	Calculate ESEM3-B output power: Pout_E3B = (Vout12* Iout12)	Pout_E3B	368,81W	
DISS-B.70	Push the command "Read input" located in the bottom left of the software window	OK	OK	
DISS-B.71	Take note of the value "I" indicated in Input Stage B window	16,00A<Iin<20,00A	17,95 A	
DISS-B.72	Measure the input current using current probe	16,00A<Iin<20,00A	18,40A	Iin
DISS-B.73	Measure the Input voltage between PIN "bypass thermal interlock" (positive) and "PRI_GND"(negative) on side A of the J300 test box	113,0V±0,5V	113,39 V	Vin
DISS-B.74	Calculate PIn=Vin*Iin	2100W±50W	2086,37W	Pin
DISS-B.75	Calculate ESEM3-A-1 output power filling the table below:	Pout_3A_1 [W]	367,06W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT1-1	2,94	26,87	0,140	27,28	80,20
OUT2-1	2,96	26,87	0,140	27,28	80,75
OUT3-1	1,86	27,20	0,140	27,46	51,08
OUT4-1	1,55	27,25	0,129	27,45	42,55
OUT5-1	1,21	27,45	0,062	27,53	33,31
OUT7-1	2,90	27,02	0,098	27,30	79,17
Pout_3A_1					367,06

DISS-B.76	Calculate ESEM3-A-2 output power filling the table below:	Pout_3A_2 [W]	457,68W

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT1-2	3,43	26,69	0,140	27,17	93,19
OUT2-2	2,91	26,88	0,140	27,29	79,41
OUT3-2	2,97	26,83	0,140	27,25	80,93
OUT4-2	1,62	27,22	0,129	27,43	44,44
OUT5-2	1,71	27,18	0,140	27,42	46,89
OUT6-2	1,71	27,22	0,129	27,44	46,92
OUT7-2	1,60	27,26	0,093	27,41	43,86
OUT8-2	0,80	27,53	0,026	27,55	22,04
Pout_3A_2					457,68

Filling the table note that:
- Iload is reported above in the regulation step;
- Vload is measured using a multimeter in parallel to the relevant load;
- Cable impedance is prefilled;
- Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses;
- P is automatically obtained;

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.77	Calculate ESEM3-A-3 output power filling the table below::	Pout_3A_3 [W]	330,40W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;
DISS-B.78	Calculate ESEM3-A-4 output power filling the table below::	Pout_3A_4 [W]	299,34W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;
DISS-B.79	Calculate the total ouput power updating the following table: Pout= Pout_E3B + Pout_3A_1 + Pout_3A_2 + Pout_3A_3 + Pout_3A_4	Pout [W]	1823,29W	
DISS-B.80	Calculate the total power dissipation:	Pdiss<365W	263,08W	

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT1-3	2,97	27,11	0,062	27,29	81,05
OUT2-1	3,00	27,10	0,062	27,29	81,87
OUT3-1	3,50	26,99	0,062	27,21	95,24
OUT8-1	2,65	27,19	0,026	27,26	72,24
Pout_3A_3					330,40

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT5-3	1,60	27,29	0,129	27,50	44,00
OUT6-1	1,60	27,32	0,129	27,53	44,05
OUT7-1	2,97	27,04	0,093	27,32	81,14
OUT8-1	4,84	26,70	0,039	26,89	130,15
Pout_3A_4					299,34

Pout_E3B	368,81
Pout_3A_1	367,06
Pout_3A_2	457,68
Pout_3A_3	330,40
Pout_3A_4	299,34
Pout	1823,29

DATE: 25.06.09	TEST CONDUCTOR 9,8 2010	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	Pdiss=Pin-Pout Pin 2086,37 Pout 1823,29 Pds 263,08			

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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10.3.2.8.3 AMS02-PDS DISSIPATION 126V

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.81	Set input bus voltage to 128,5V	128,5V±0,2V	128,5V	In order to have 126V at nominal configuration
DISS-B.82	Click ON ESEM3-A-1 icon	OK	OK	
DISS-B.83	Using board telemetries regulate the current of following outputs: Iout1-1 Iout2-1 Iout3-1 Iout4-1 Iout5-1 Iout7-1	 2,90A±100mA 2,90A±100mA 1,80A±100mA 1,50A±100mA 1,20A±100mA 2,90A±100mA	 2,92 A 2,97 A 1,88 A 1,57 A 1,27 A 2,93 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.84	Click ON ESEM3-A-2 icon	OK	OK	
DISS-B.85	Using board telemetries regulate the current of following outputs: Iout1-2 Iout2-2 Iout3-2 Iout4-2 Iout5-2 Iout6-2 Iout7-2 Iout8-2	 3,40A±100mA 2,90A±100mA 2,90A±100mA 1,50A±100mA 1,80A±100mA 1,60A±100mA 1,50A±100mA 0,70A±100mA	 3,47 A 2,98 A 2,99 A 1,55 A 1,78 A 1,58 A 1,58 A 0,79 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.86	Click ON ESEM3-A-3 icon	OK	OK	
DISS-B.87	Using board telemetries regulate the current of following outputs: Iout1-3 Iout2-3 Iout3-3 Iout8-3	 2,9A±100mA 2,9A±100mA 3,4A±100mA 2,6 A±100mA	 2,95 A 2,98 A 3,49 A 2,62 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.88	Click ON ESEM3-A-4 icon	OK	OK	
DISS-B.89	Using board telemetries regulate the current of following outputs: Iout5-4 Iout6-4 Iout7-4 Iout8-4	 1,6A±100mA 1,5A±100mA 2,9A±100mA 4,8A±100mA	 1,67 A 1,57 A 2,98 A 4,9 A	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
DISS-B.90	Click ON ESEM 3-B icon	OK	OK	
DISS-B.91	Insert an Amperometer in series to outlet 12	OK	OK	
DISS-B.92	Using board telemetries regulate the current of following outputs: Iout12	 3,60A±100mA	 3,68 A	Iout12 - Nominal value 3,80A @ 120V

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.93	Using a multimeter measure the output voltage of **ESEM3-B**: OUT12	124<Vout12<126V	125,2 V	
DISS-B.94	Calculate ESEM3-B output power: Pout_E3B = (Vout12* Iout12)	Pout_E3B	460,73W	
DISS-B.95	Push the command "Read input" located in the bottom left of the software window	OK	OK	
DISS-B.96	Take note of the value "I" indicated in Input Stage B window	16,00A<Iin<20,00A	16,37A	
DISS-B.97	Measure the input current using current probe	16,00A<Iin<20,00A	16,83 A	Iin
DISS-B.98	Measure the Input voltage between PIN "bypass thermal interlock" (positive) and "PRI_GND"(negative) on side A of the J300 test box	126,0V±0,5V	126,43V	Vin
DISS-B.99	Calculate PIn=Vin*Iin	2100W±50W	2127,81W	Pin
DISS-B.100	Calculate ESEM3-A-1 output power filling the table below:	Pout_3A_1 [W]	371,12W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT1-1	2,92	26,92	0,140	27,33	79,80
OUT2-1	2,97	26,92	0,140	27,34	81,20
OUT3-1	1,88	27,25	0,140	27,51	51,72
OUT4-1	1,57	27,30	0,129	27,50	43,18
OUT5-1	1,27	27,50	0,062	27,58	35,03
OUT7-1	2,93	27,08	0,098	27,37	80,19
Pout_3A_1					371,12

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.101	Calculate ESEM3-A-2 output power filling the table below:	Pout_3A_2 [W]	457,70W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT1-2	3,47	26,74	0,140	27,23	94,49
OUT2-2	2,98	26,93	0,140	27,35	81,50
OUT3-2	2,99	26,88	0,140	27,30	81,63
OUT4-2	1,55	27,27	0,129	27,47	42,58
OUT5-2	1,78	27,23	0,140	27,48	48,91
OUT6-2	1,58	27,27	0,129	27,47	43,40
OUT7-2	1,58	27,31	0,093	27,46	43,39
OUT8-2	0,79	27,57	0,026	27,59	21,80
Pout_3A_2					457,70

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
DISS-B.102	Calculate ESEM3-A-3 output power filling the table below::	Pout_3A_3 [W]	328,70W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;
DISS-B.103	Calculate ESEM3-A-4 output power filling the table below::	Pout_3A_4 [W]	303,95W	Filling the table note that: - Iload is reported above in the regulation step; - Vload is measured using a multimeter in parallel to the relevant load; - Cable impedance is prefilled; - Vbox is automatically obtained and represent the value of Vout at the unit connector recovering the cable-impedence losses; - P is automatically obtained;
DISS-B.104	Calculate the total ouput power updating the following table: Pout= Pout_E3B + Pout_3A_1 + Pout_3A_2 + Pout_3A_3 + Pout_3A_4	Pout [W]	1922,20W	
DISS-B.105	Calculate the total power dissipation:	Pdiss<333W	205,61W	

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT1-3	2,95	27,15	0,062	27,33	80,62
OUT2-1	2,98	27,14	0,062	27,32	81,41
OUT3-1	3,49	27,04	0,062	27,26	95,14
OUT8-1	2,62	27,23	0,026	27,30	71,53
Pout_3A_3					328,70

Load	Iload [I]	Vload [V]	Cable impedance [Ω]	Vbox [V]	P [W]
OUT5-3	1,67	27,34	0,129	27,56	46,03
OUT6-1	1,57	27,37	0,129	27,57	43,28
OUT7-1	2,98	27,09	0,093	27,37	81,56
OUT8-1	4,94	26,75	0,039	26,94	133,08
Pout_3A_4					303,95

Pout_E3B	460,73
Pout_3A_1	371,12
Pout_3A_2	457,70
Pout_3A_3	328,70
Pout_3A_4	303,95
Pout	1922,20

DATE: 25.06.09	TEST CONDUCTOR GF 2010	QA	CUSTOMER

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UUT DATA : **Model** **PFM** **Item** **AMS02 POWER DISTRIBUTION SYSTEM** **C.I.** **PDS 18** **S/N** **FM01**

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	Pdiss=Pin-Pout Pin 2127,81 Pout 1922,20 Pds 205,61			
DISS-B.106	Set OFF in DCDC OFF/ON window and send the command for all PB2 boards	OK		
DISS-B.107	Command OFF the outlets OUT12 of ESEM3-B board	OFF		
DISS-B.108	Switch OFF the "power switch "of "power switch box"	Switch OFF		
DISS-B.109	Switch OFF main power bus	OFF		

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA :	Model	PFM	Item	AMS02 POWER DISTRIBUTION SYSTEM	C.I.	PDS 18	S/N	FM01

10.3.3 HOT REDUNDANCY

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
HR.1	Connect AI_120V and AI_120V_RTN power supply signals	OK	OK	Side A Power Supply
HR.2	Connect BI_120V and BI_120V_RTN power supply signals	OK	OK	Side B Power Supply
HR.3	Connect the loads of the ESEM3B boards (side A and side B) as described in the table. The following column resumes the currents (with Main bus equal to 120V): OUTLET # / CURRENT [A] SET 1 / 1,200±100mA 2 / 3,200±100mA 3 / 1,200±100mA 6 / 1,200±100mA	OK	OK	There is no need to check the current absorption of the loads. CCS load not connected
HR.4	Set all the loads of the other boards (side A and side B) to 0A except the following loads: ESEM3A-1: outlet 3 JPD_N = 1,80A (side A and side B). ESEM3A-4: outlet 1 JPD_R = 1,80A (side A and side B).	OK	OK	Set active loads to constant current mode. Set current on display with 100mA above the desired value
HR.5	Set both power supply voltage to 120V	120V ± 0.2V	120V	
HR.6	Set both power supply current limitation to 15.0A	15.0A±0.5A	15.0A	
HR.7	Switch ON the **"power switch "of "power switch box" side A**	OK	OK	
HR.8	Take note of input current	8,3A±0,5A	7,8 A	
HR.9	Select PDS controller software	program open	program open	
HR.10	Set the CAN BUS board address to 30	30	30	
HR.11	Select JMDC = 0	0	0	
HR.12	Select TX = A	A	A	
HR.13	Select RX = A	A	A	
HR.14	Select "CAN BUS I/F Side" to A	A	A	
HR.15	Select "PDS Side" to A	A	A	
HR.16	Click on Run flash command	OK	OK	
HR.17	Click on ESEM3-B button	OK	OK	Button located on left side of PDS controller software window
HR.18	Verify the status of the following flags: BOARD STATUS OVT Alarm O__1 CMD: AH_OUT1	 OK OK ON	 OK OK ON	

DATE: 25.06.09	TEST CONDUCTOR	QA	CUSTOMER

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O__2 CMD: AH_OUT2	ON	ON	
	O__3 CMD: AH_OUT3	ON	ON	
	O__4 CMD: AH_OUT4	OFF	OFF	
	O__5 CMD: AH_OUT5	OFF	OFF	
	O__6 CMD: AH_OUT6	ON	ON	
	O__7 CMD: AH_OUT7	OFF	OFF	
	O__8 CMD: AH_OUT8	OFF	OFF	
	O__9 CMD: AH_OUT9	OFF	OFF	
	O_10 CMD: AH_OUT10	OFF	OFF	
	O_11 CMD: AH_OUT11	OFF	OFF	
	O_12 CMD: AO_CCEB	OFF	OFF	
	O__1 Status: AH_OUT1	ON	ON	
	O__2 Status: AH_OUT2	ON	ON	
	O__3 Status: AH_OUT3	ON	ON	
	O__4 Status: AH_OUT4	OFF	OFF	
	O__5 Status : AH_OUT5	OFF	OFF	
	O__6 Status: AH_OUT6	ON	ON	
	O__7 Status: AH_OUT7	OFF	OFF	
	O__8 Status: AH_OUT8	OFF	OFF	
	O__9 Status: AH_OUT9	OFF	OFF	
	O_10 Status: AH_OUT10	OFF	OFF	
	O_11 Status: AH_OUT11	OFF	OFF	
	O_12 Status: AO_CCEB	OFF	OFF	
	O_12 Trip: AO_CCEB	OK	OK	
HR.19	Push on Read All button in Analog Readout column	OK	OK	
HR.20	Take note of the following values in "Analog readout" column: Temperature O_12 Current: AO_CCEB Analog Ref. 2.5V	 -40°C<T<80C° 0,00A±0,45A 2,500V±150mV	 27,80°C 0,12 A 2,49 V	
HR.21	Set the CAN BUS board address to 31	31	31	
HR.22	Select "CAN BUS I/F Side" to B	B	B	
HR.23	Select "PDS Side" to B	B	B	
HR.24	Switch ON the "power switch "of "power switch box" side B	OK	OK	
HR.25	Click on Run flash command	OK	OK	
HR.26	Click on ESEM3-B button	OK	OK	Button located on left side of PDS controller software window
HR.27	Verify the status of the following flags: BOARD STATUS	OK	OK	

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	OVT Alarm	OK	OK	
	O__1 CMD: AH_OUT1	ON	ON	
	O__2 CMD: AH_OUT2	ON	ON	
	O__3 CMD: AH_OUT3	ON	ON	
	O__4 CMD: AH_OUT4	OFF	OFF	
	O__5 CMD: AH_OUT5	OFF	OFF	
	O__6 CMD: AH_OUT6	ON	ON	
	O__7 CMD: AH_OUT7	OFF	OFF	
	O__8 CMD: AH_OUT8	OFF	OFF	
	O__9 CMD: AH_OUT9	OFF	OFF	
	O_10 CMD: AH_OUT10	OFF	OFF	
	O_11 CMD: AH_OUT11	OFF	OFF	
	O_12 CMD: AO_CCEB	OFF	OFF	
	O__1 Status: AH_OUT1	ON	ON	
	O__2 Status: AH_OUT2	ON	ON	
	O__3 Status: AH_OUT3	ON	ON	
	O__4 Status: AH_OUT4	OFF	OFF	
	O__5 Status : AH_OUT5	OFF	OFF	
	O__6 Status: AH_OUT6	ON	ON	
	O__7 Status: AH_OUT7	OFF	OFF	
	O__8 Status: AH_OUT8	OFF	OFF	
	O__9 Status: AH_OUT9	OFF	OFF	
	O_10 Status: AH_OUT10	OFF	OFF	
	O_11 Status: AH_OUT11	OFF	OFF	
	O_12 Status: AO_CCEB	OFF	OFF	
	O_12 Trip: AO_CCEB	OK	OK	
HR.28	Push on Read All button in Analog Readout column	OK	OK	
HR.29	Take note of the following values in "Analog readout" column: Temperature O_12 Current: AO_CCEB Analog Ref. 2.5V	 -40°C<T<80C° 0,00A±0,45A 2,500V±150mV	 24,50°C 0,13 A 2,50 V	
HR.30	Select "PDS Side" to A	A	A	
HR.31	Click on ESEM3-B button	OK	OK	Button located on left side of PDS controller software window
HR.32	Verify the status of the following flags: BOARD STATUS OVT Alarm O__1 CMD: AH_OUT1	 OK OK ON	 OK OK ON	

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O__2 CMD: AH_OUT2	ON	ON	
	O__3 CMD: AH_OUT3	ON	ON	
	O__4 CMD: AH_OUT4	OFF	OFF	
	O__5 CMD: AH_OUT5	OFF	OFF	
	O__6 CMD: AH_OUT6	ON	ON	
	O__7 CMD: AH_OUT7	OFF	OFF	
	O__8 CMD: AH_OUT8	OFF	OFF	
	O__9 CMD: AH_OUT9	OFF	OFF	
	O_10 CMD: AH_OUT10	OFF	OFF	
	O_11 CMD: AH_OUT11	OFF	OFF	
	O_12 CMD: AO_CCEB	OFF	OFF	
	O__1 Status: AH_OUT1	ON	ON	
	O__2 Status: AH_OUT2	ON	ON	
	O__3 Status: AH_OUT3	ON	ON	
	O__4 Status: AH_OUT4	OFF	OFF	
	O__5 Status : AH_OUT5	OFF	OFF	
	O__6 Status: AH_OUT6	ON	ON	
	O__7 Status: AH_OUT7	OFF	OFF	
	O__8 Status: AH_OUT8	OFF	OFF	
	O__9 Status: AH_OUT9	OFF	OFF	
	O_10 Status: AH_OUT10	OFF	OFF	
	O_11 Status: AH_OUT11	OFF	OFF	
	O_12 Status: AO_CCEB	OFF	OFF	
	O_12 Trip: AO_CCEB	OK	OK	
HR.33	Push on Read All button in Analog Readout column	OK	OK	
HR.34	Take note of the following values in "Analog readout" column: Temperature O_12 Current: AO_CCEB Analog Ref. 2.5V	 -40°C<T<80C° 0,00A±0,45A 2,500V±150mV	 27,80°C 0,12 A 2,49 V	
HR.35	Set the CAN BUS board address to 30	30	30	
HR.36	Select "CAN BUS I/F Side" to A	A	A	
HR.37	Select "PDS Side" to B	B	B	
HR.38	Click on ESEM3-B button	OK	OK	Button located on left side of PDS controller software window
HR.39	Verify the status of the following flags: BOARD STATUS OVT Alarm O__1 CMD: AH_OUT1	 OK OK ON	 OK OK ON	

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UUT DATA : Model PFM — Item AMS02 POWER DISTRIBUTION SYSTEM — C.I. PDS 18 — S/N FM01

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	O__2 CMD: AH_OUT2	ON	ON	
	O__3 CMD: AH_OUT3	ON	ON	
	O__4 CMD: AH_OUT4	OFF	OFF	
	O__5 CMD: AH_OUT5	OFF	OFF	
	O__6 CMD: AH_OUT6	ON	ON	
	O__7 CMD: AH_OUT7	OFF	OFF	
	O__8 CMD: AH_OUT8	OFF	OFF	
	O__9 CMD: AH_OUT9	OFF	OFF	
	O_10 CMD: AH_OUT10	OFF	OFF	
	O_11 CMD: AH_OUT11	OFF	OFF	
	O_12 CMD: AO_CCEB	OFF	OFF	
	O__1 Status: AH_OUT1	ON	ON	
	O__2 Status: AH_OUT2	ON	ON	
	O__3 Status: AH_OUT3	ON	ON	
	O__4 Status: AH_OUT4	OFF	OFF	
	O__5 Status : AH_OUT5	OFF	OFF	
	O__6 Status: AH_OUT6	ON	ON	
	O__7 Status: AH_OUT7	OFF	OFF	
	O__8 Status: AH_OUT8	OFF	OFF	
	O__9 Status: AH_OUT9	OFF	OFF	
	O_10 Status: AH_OUT10	OFF	OFF	
	O_11 Status: AH_OUT11	OFF	OFF	
	O_12 Status: AO_CCEB	OFF	OFF	
	O_12 Trip: AO_CCEB	OK	OK	
HR.40	Push on Read All button in Analog Readout column	OK	OK	
HR.41	Take note of the following values in "Analog readout" column: Temperature O_12 Current: AO_CCEB Analog Ref. 2.5V	 -40°C<T<80C° 0,00A±0,45A 2,500V±150mV	 24,50°C 0,13 A 2,50 V	
HR.42	Switch OFF main power bus A	OK	A	
HR.43	Switch OFF main power bus B	OK	OK	
HR.44	Switch OFF the "power switch "of "power switch box" side A	Switch OFF	Switch OFF	
HR.45	Switch OFF the "power switch "of "power switch box" side B	Switch OFF	Switch OFF	
HR.46	Disconnect al loads of ESEM-3B board	OK	OK	

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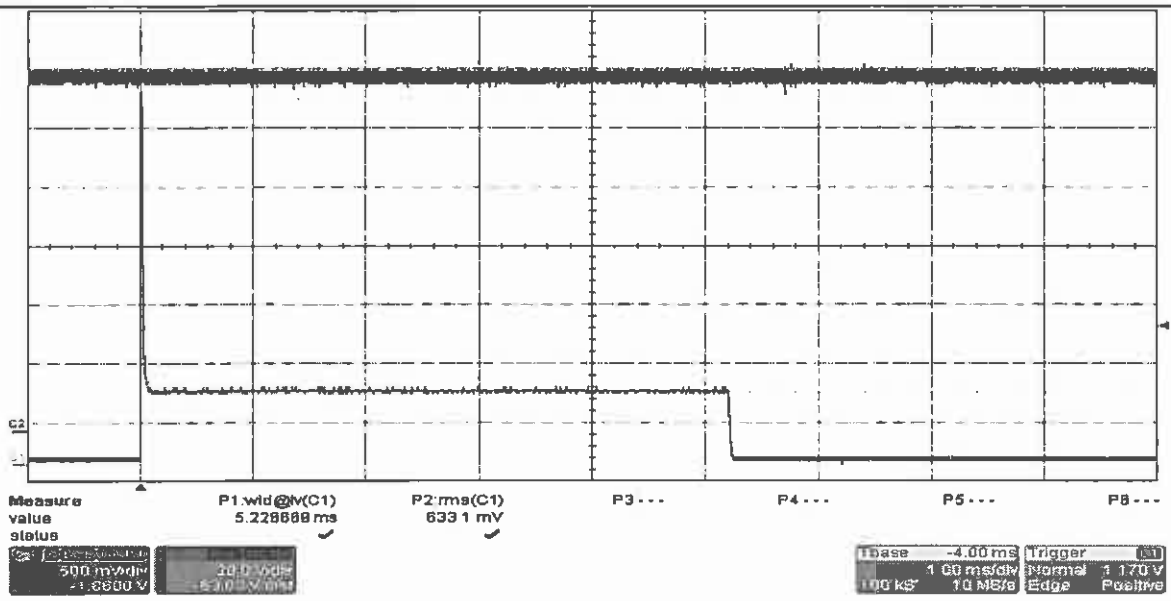
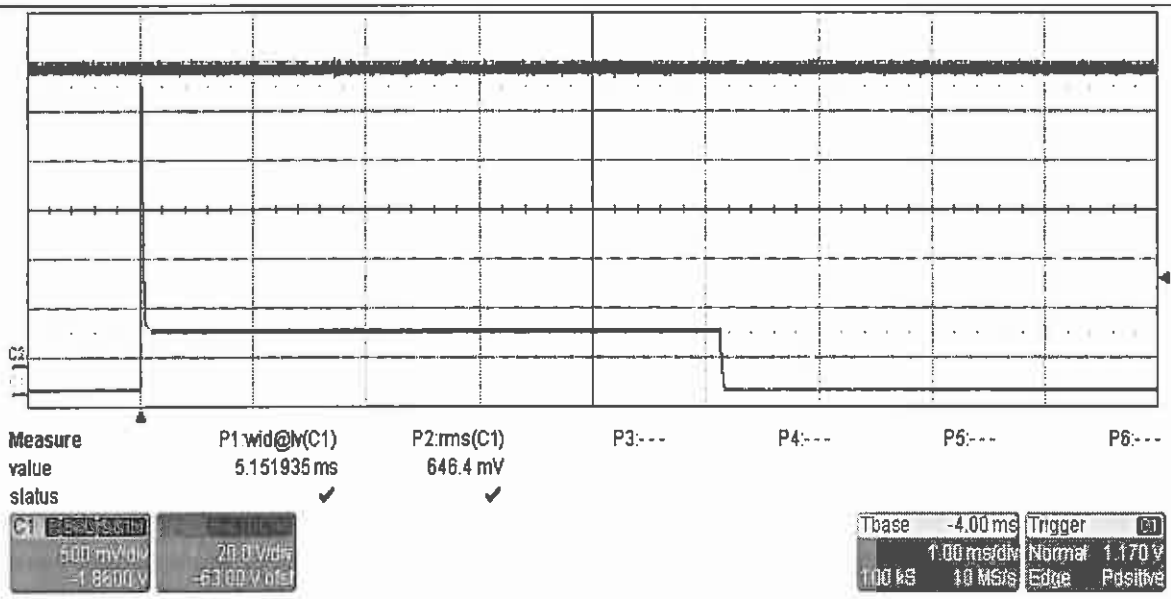
10.4 ANNEX



C1= I 5A/div

C2 = 28V

Annex_ 1



C1= I 5A/div

C2 = 28V

Annex_ 2

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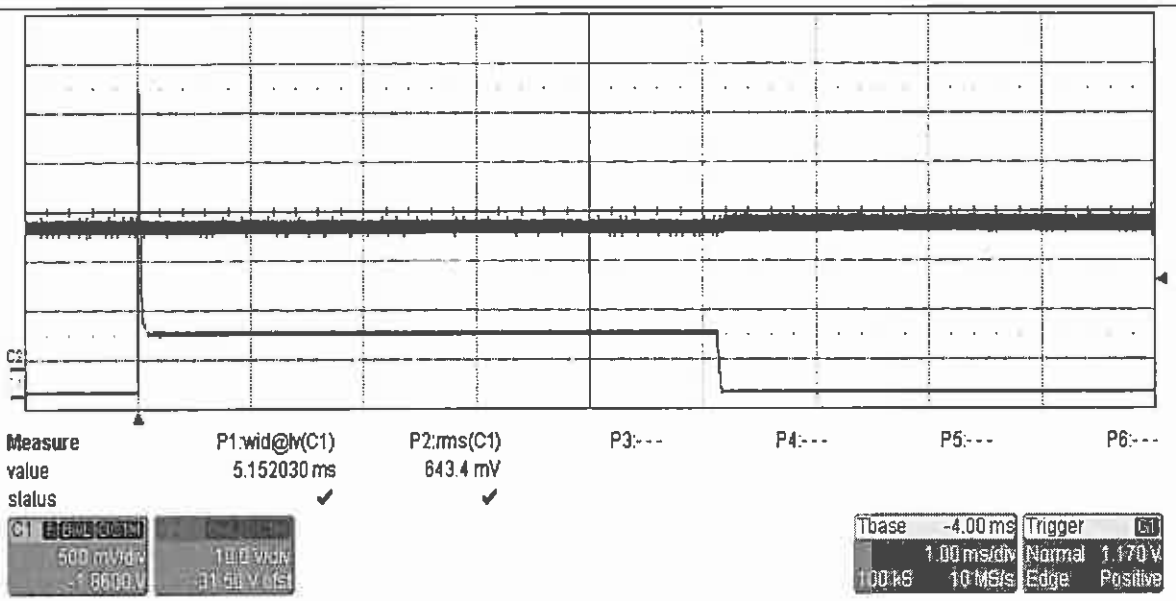
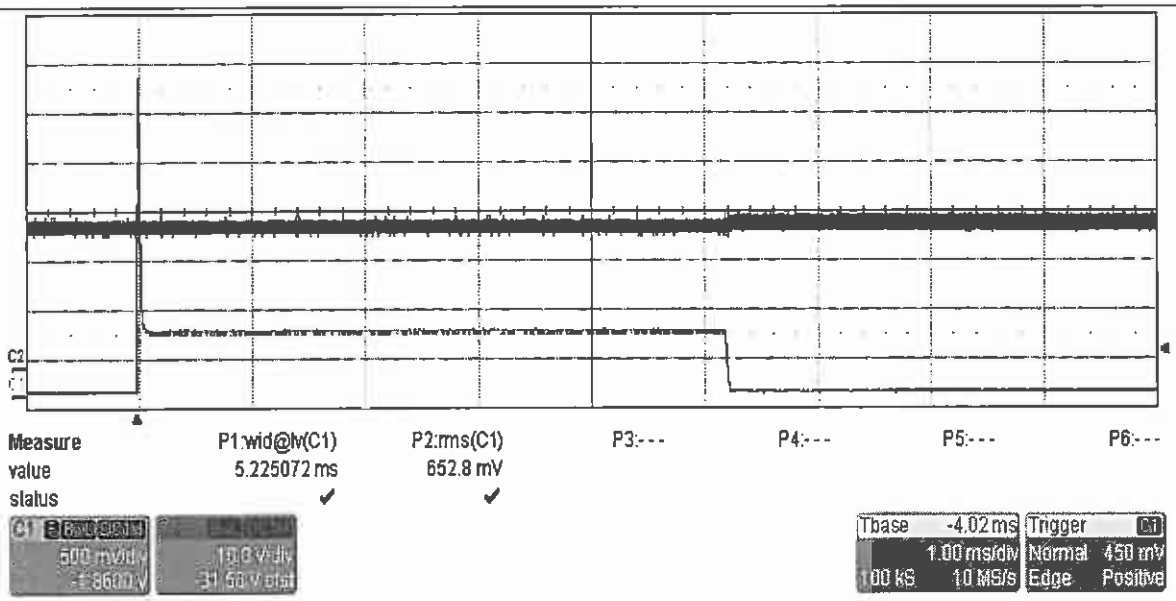


C1= I 5A/div

C2 = 28V

Annex_ 3



C1= I 5A/div

C2 = 28V

Annex_ 4

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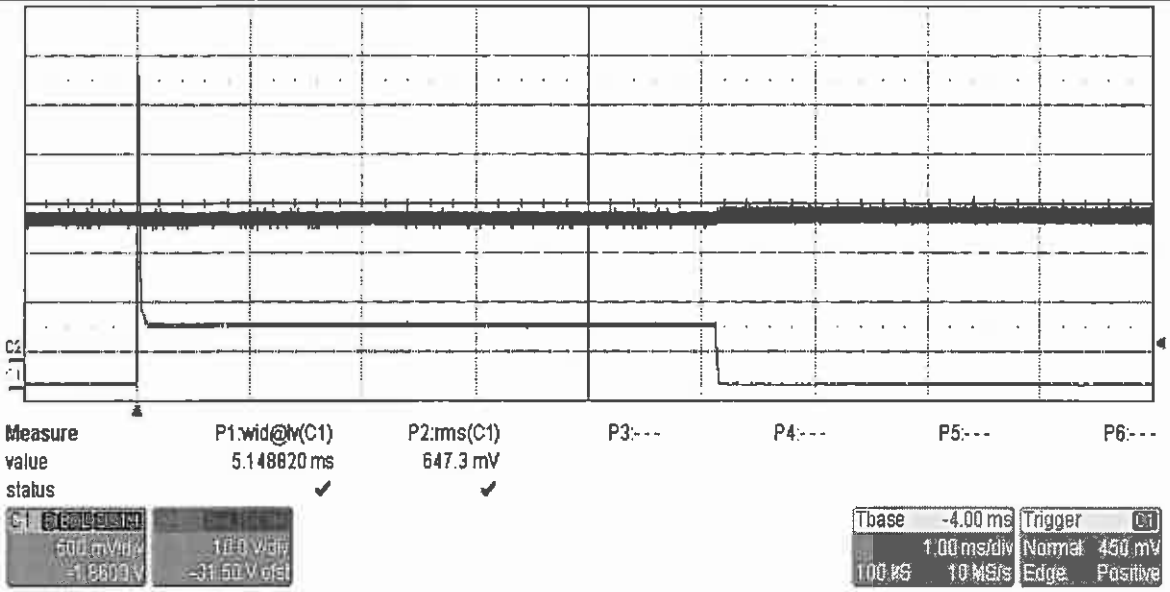
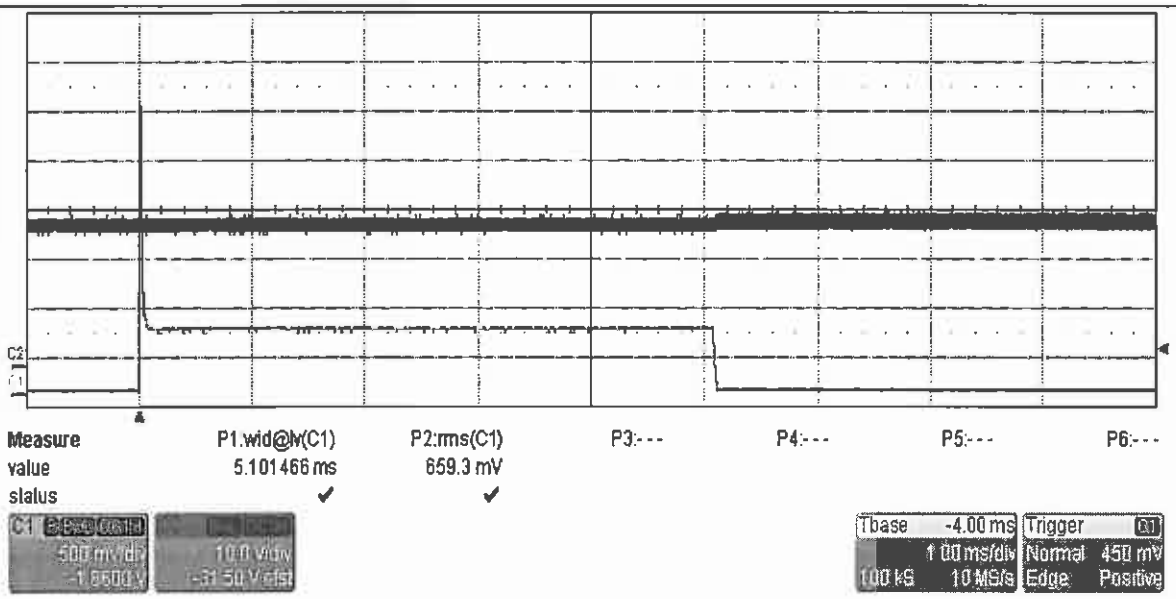


C1= I 5A/div

C2 = 28V

Annex_ 5



C1= I 5A/div

C2 = 28V

Annex_ 6

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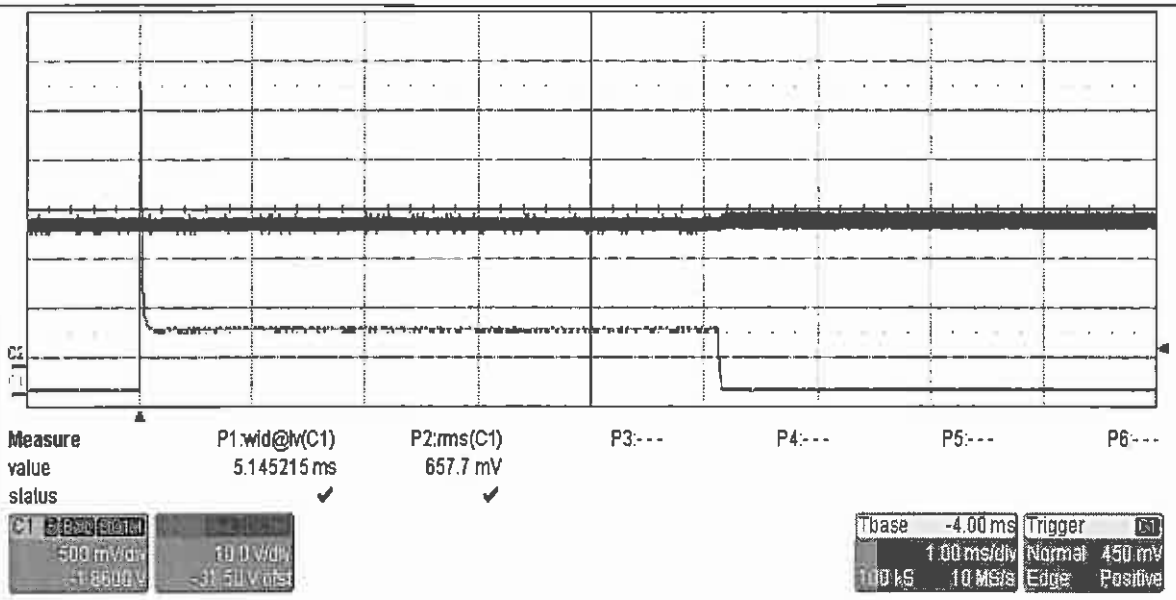
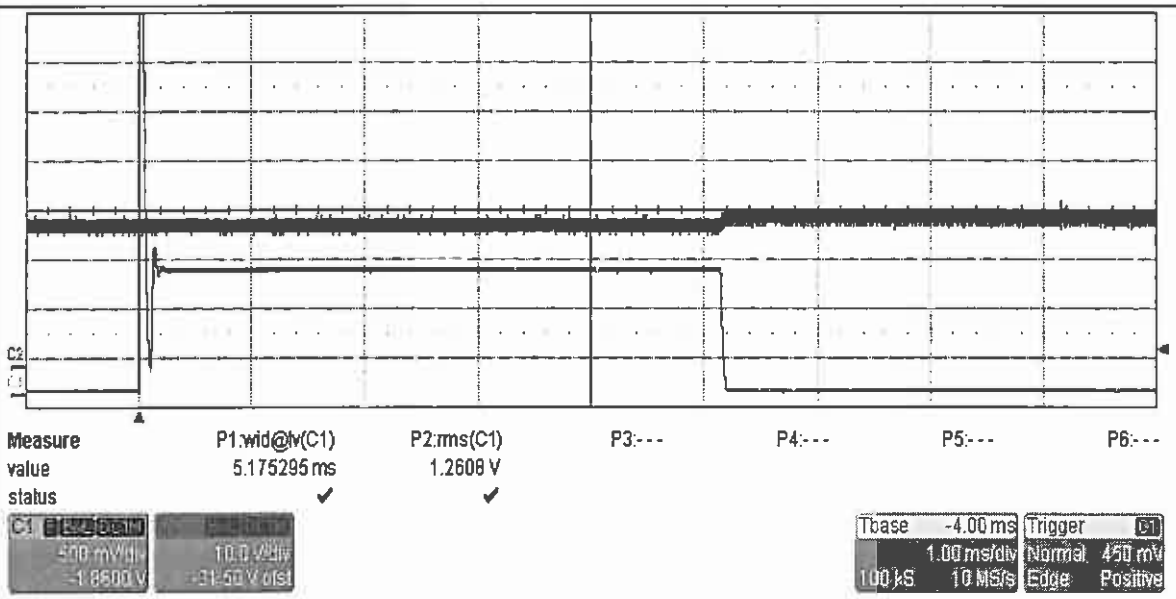


C1= I 5A/div

C2 = 28V

Annex_ 7



C1= I 5A/div

C2 = 28V

Annex_ 8

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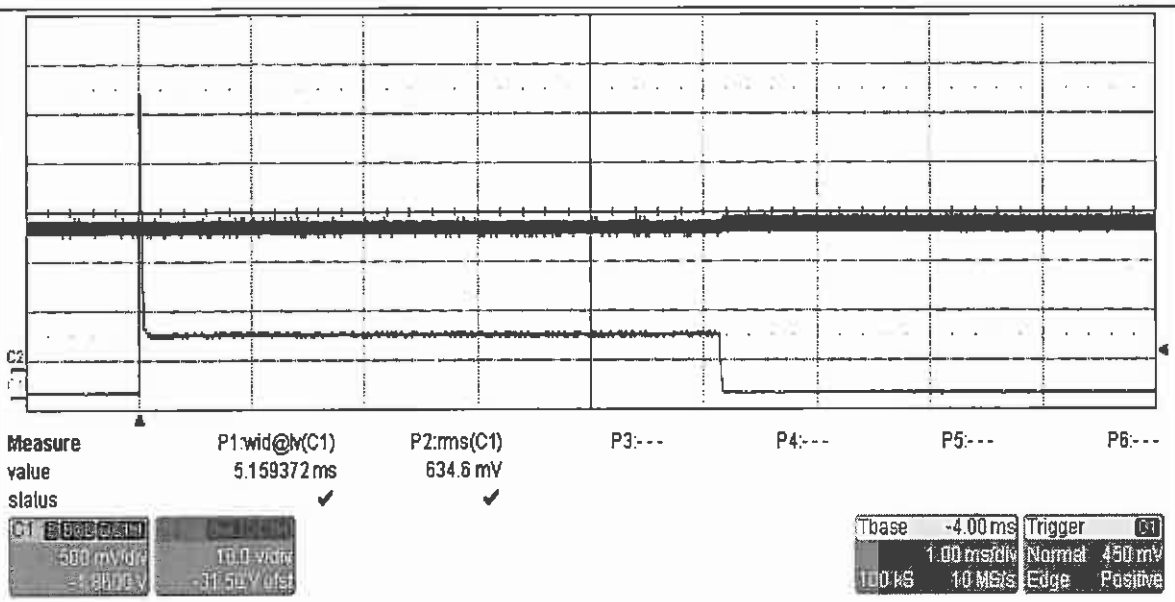
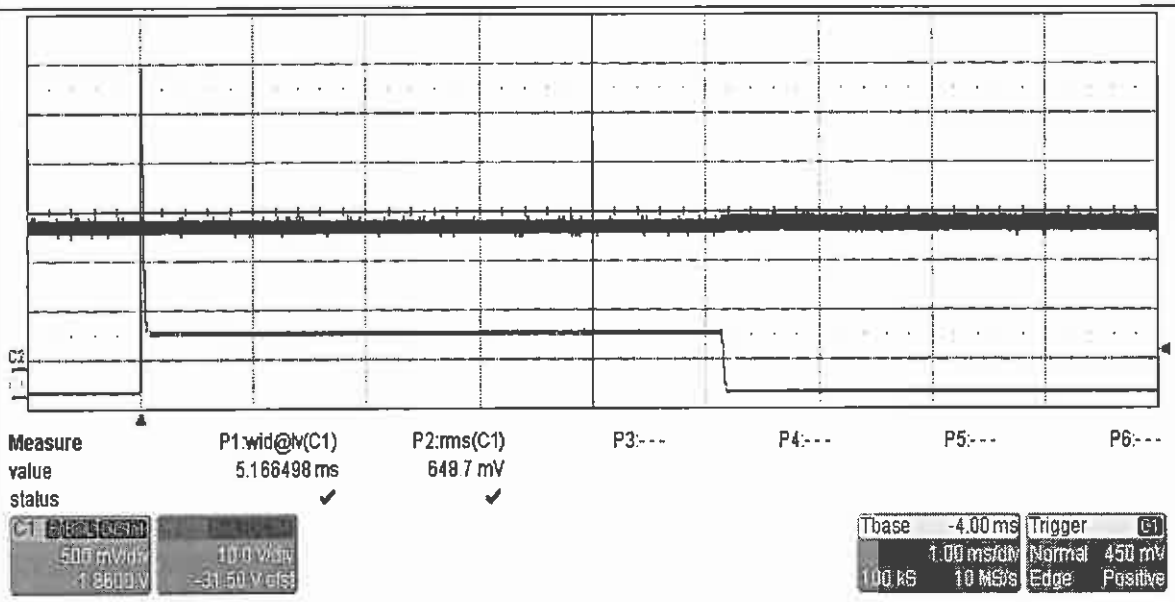


C1= I 5A/div

C2 = 28V

Annex_ 9



C1= I 5A/div

C2 = 28V

Annex_ 10

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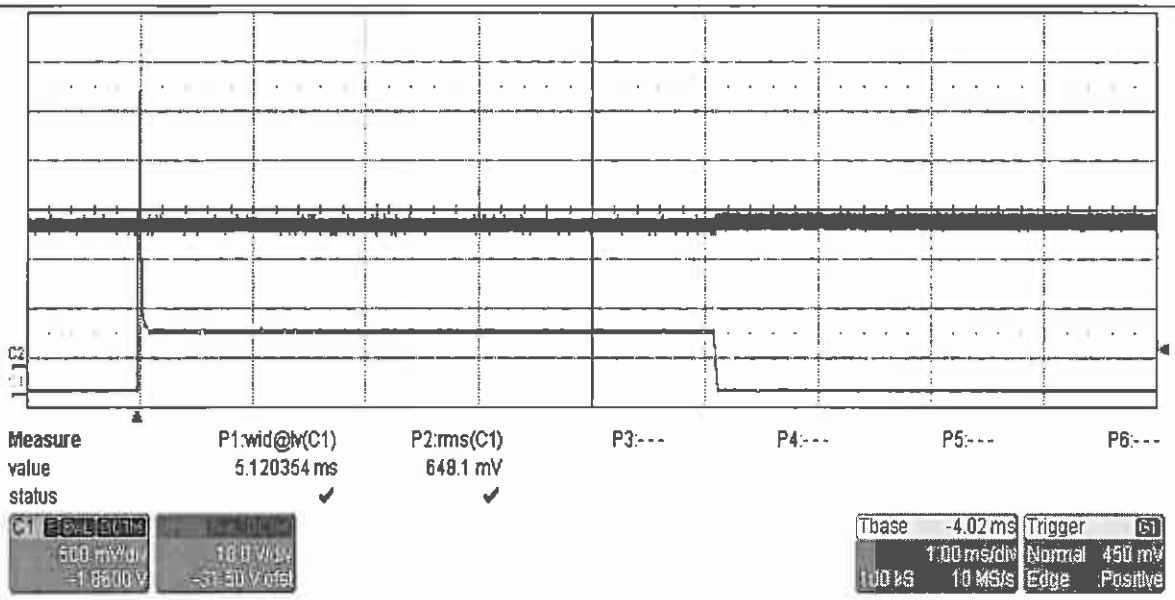
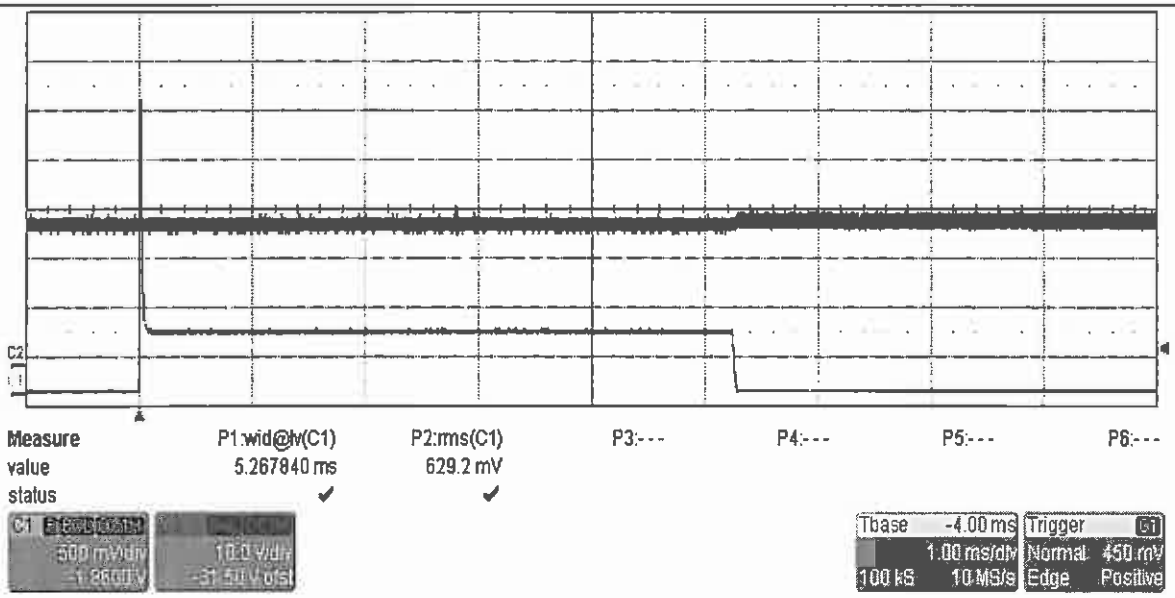


C1= I 5A/div

C2 = 28V

Annex_ 11



C1= I 5A/div

C2 = 28V

Annex_ 12

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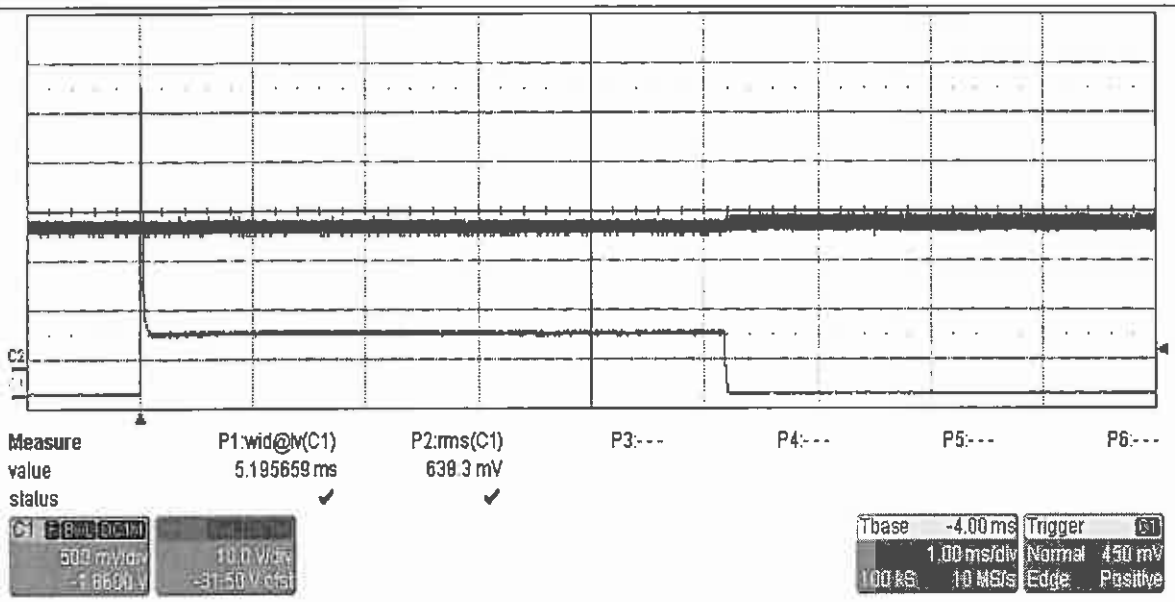
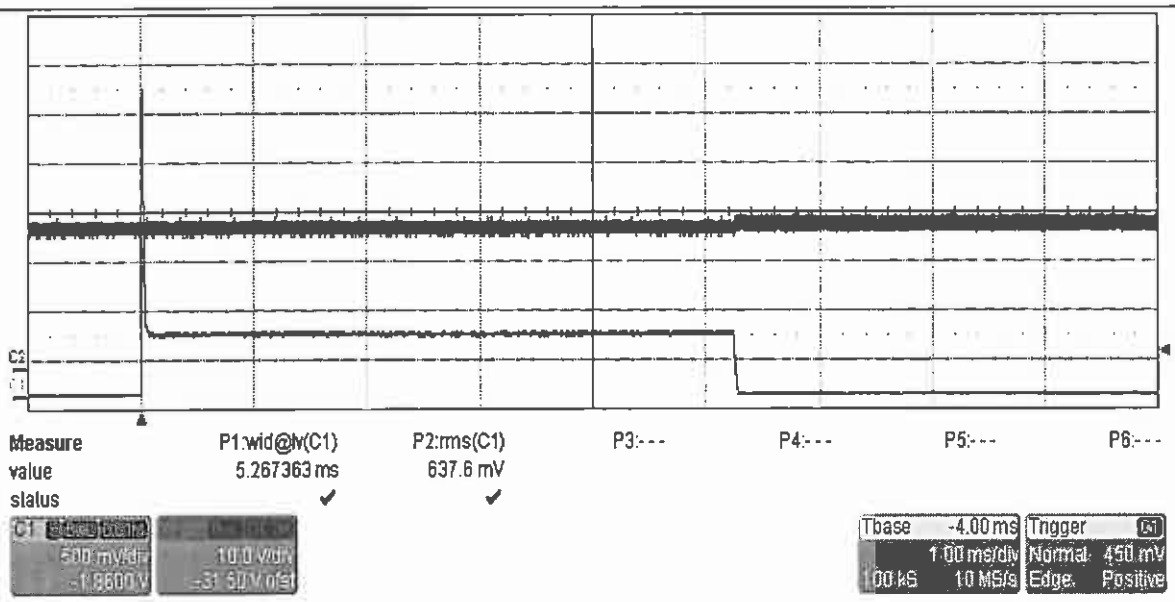


C1= I 5A/div

C2 = 28V

Annex_ 13



C1= I 5A/div

C2 = 28V

Annex_ 14

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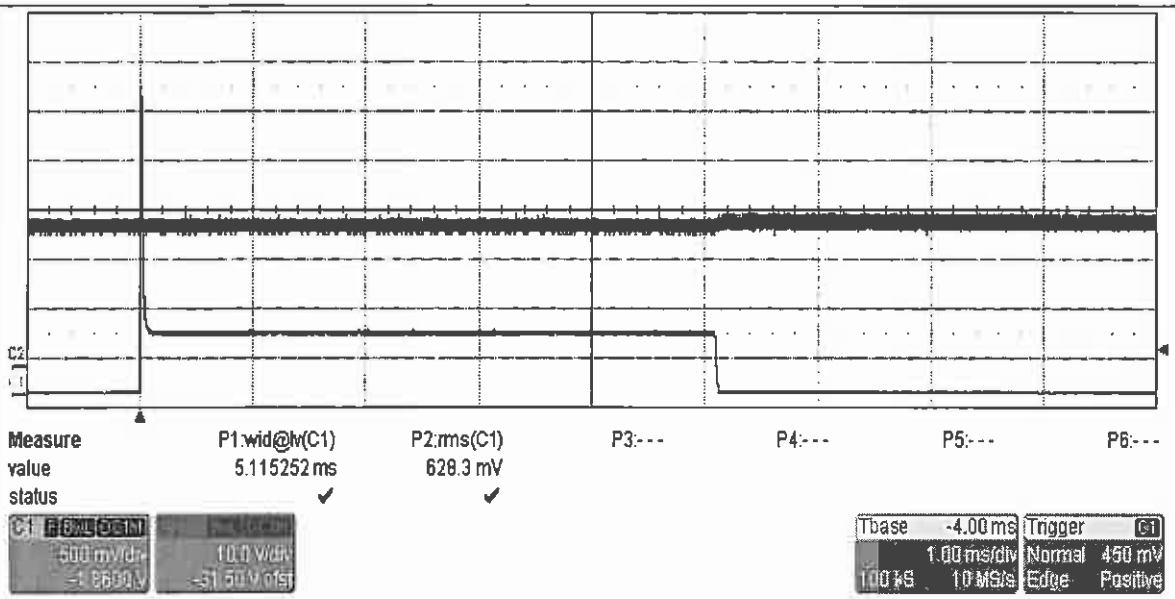
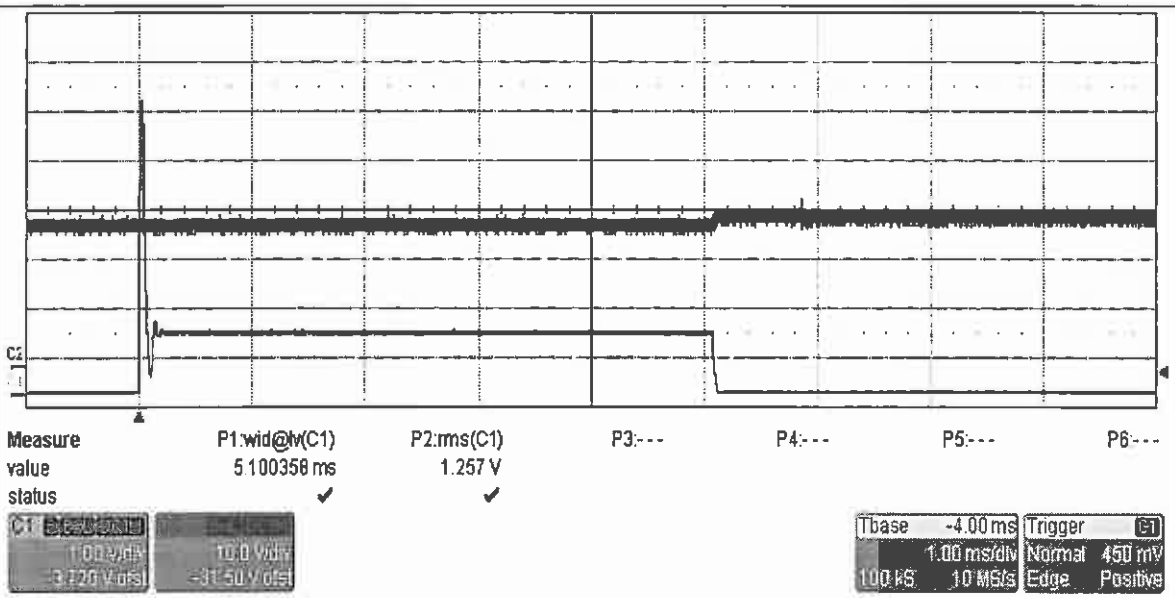


C1= I 5A/div

C2 = 28V

Annex_ 15



C1= I 10A/div

C2 = 28V

Annex_ 16

Questo documento contiene informazioni di proprietà di CARLO GAVAZZI SPACE SpA. Tutti i diritti sono riservati.
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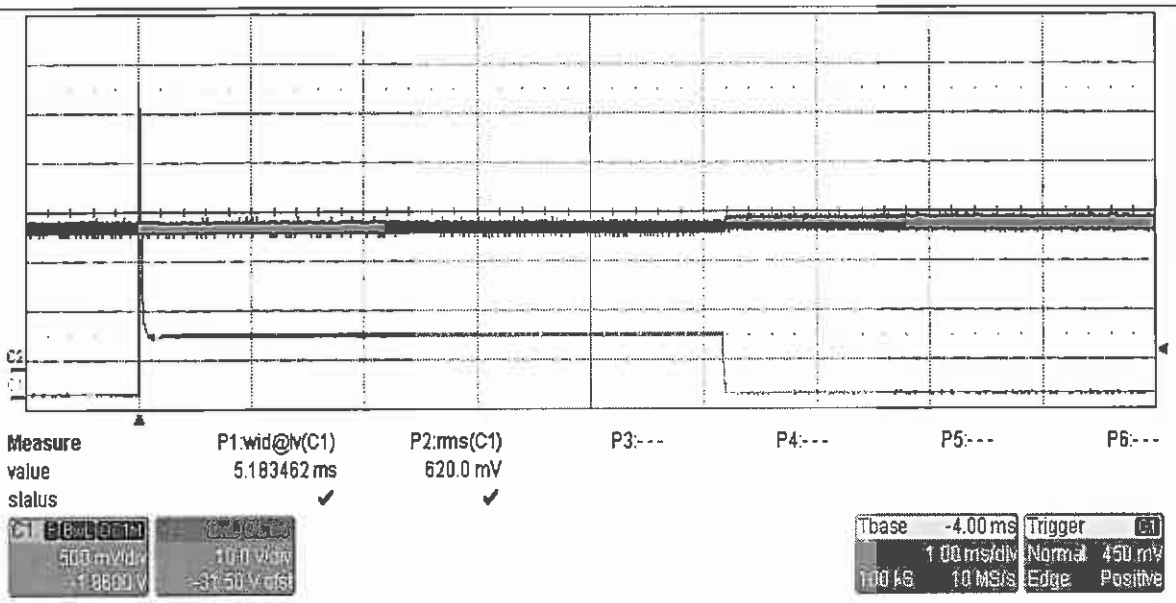
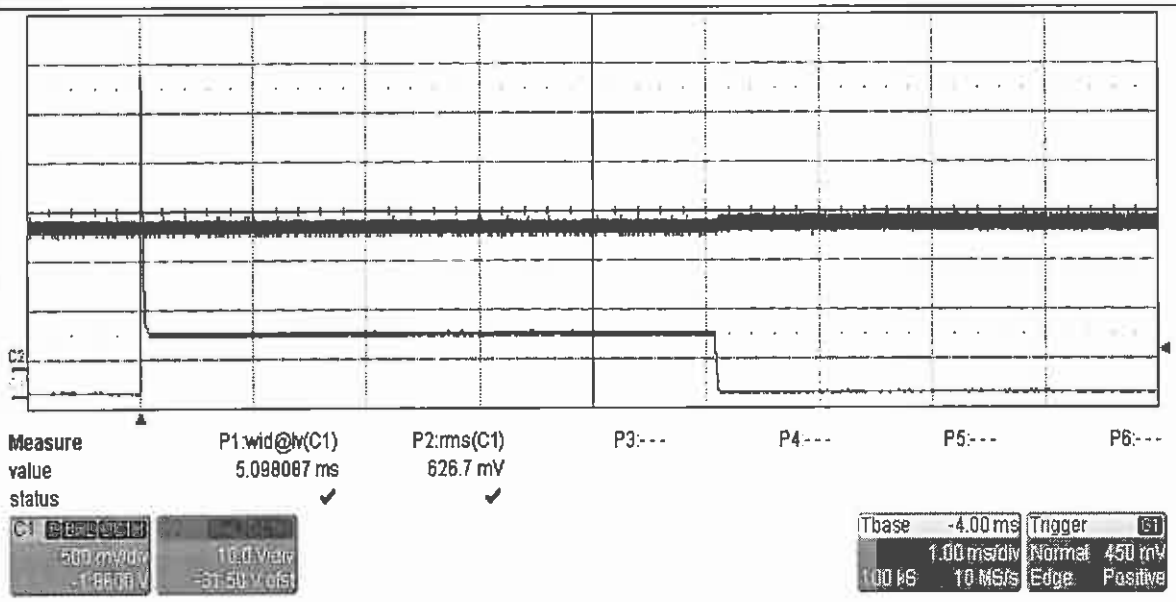


C1= I 5A/div

C2 = 28V

Annex_ 17



C1= I 5A/div

C2 = 28V

Annex_ 18

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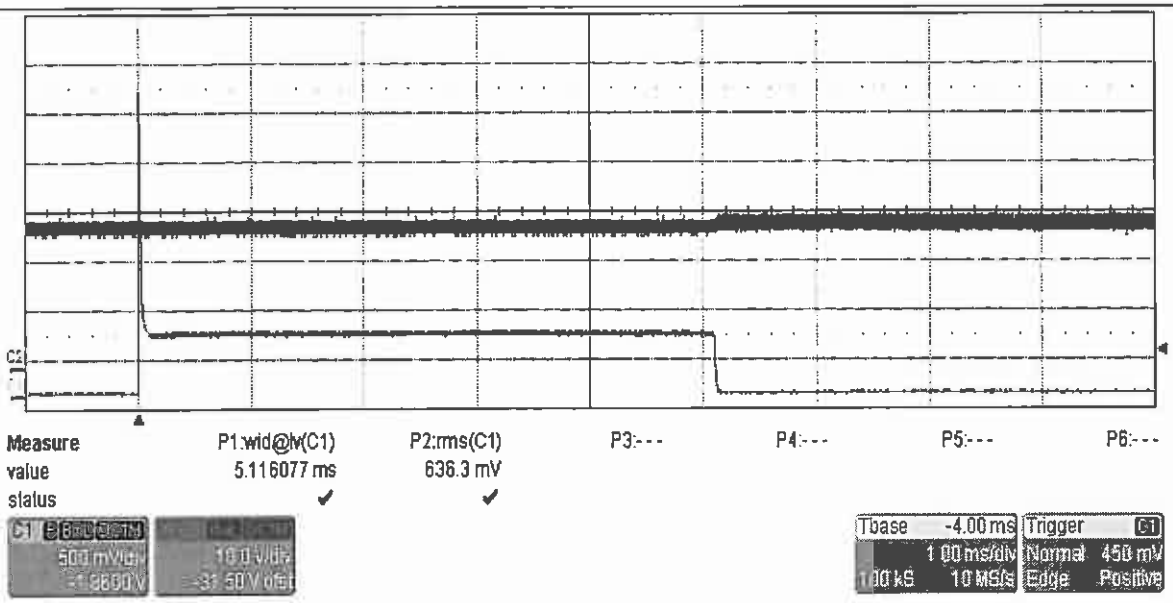
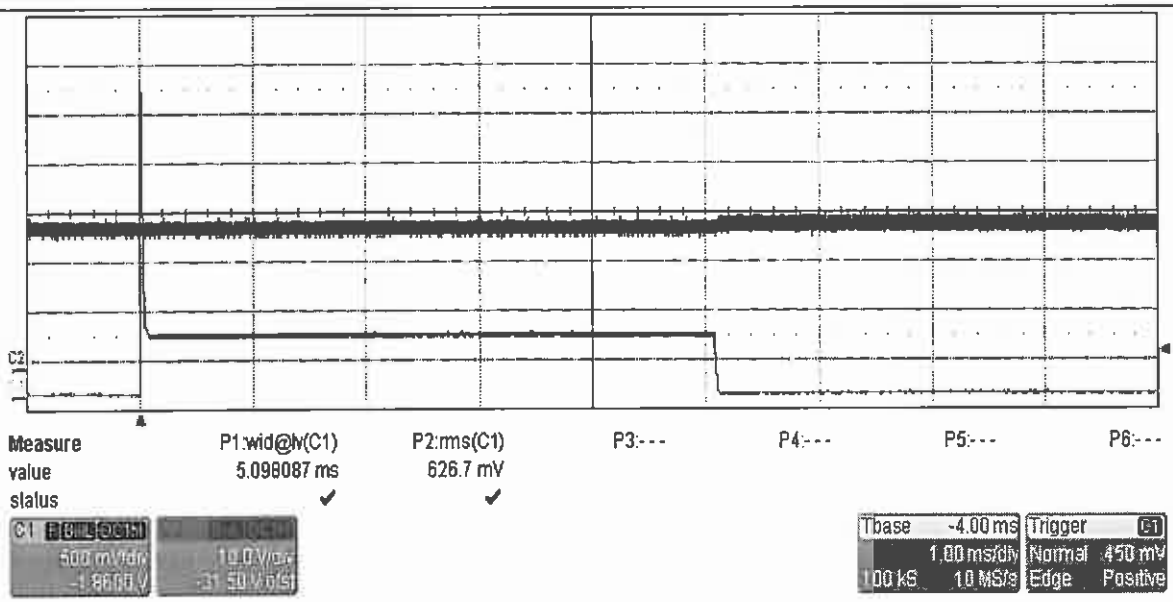


C1= I 5A/div

C2 = 28V

Annex_ 19



C1= I 5A/div

C2 = 28V

Annex_ 20

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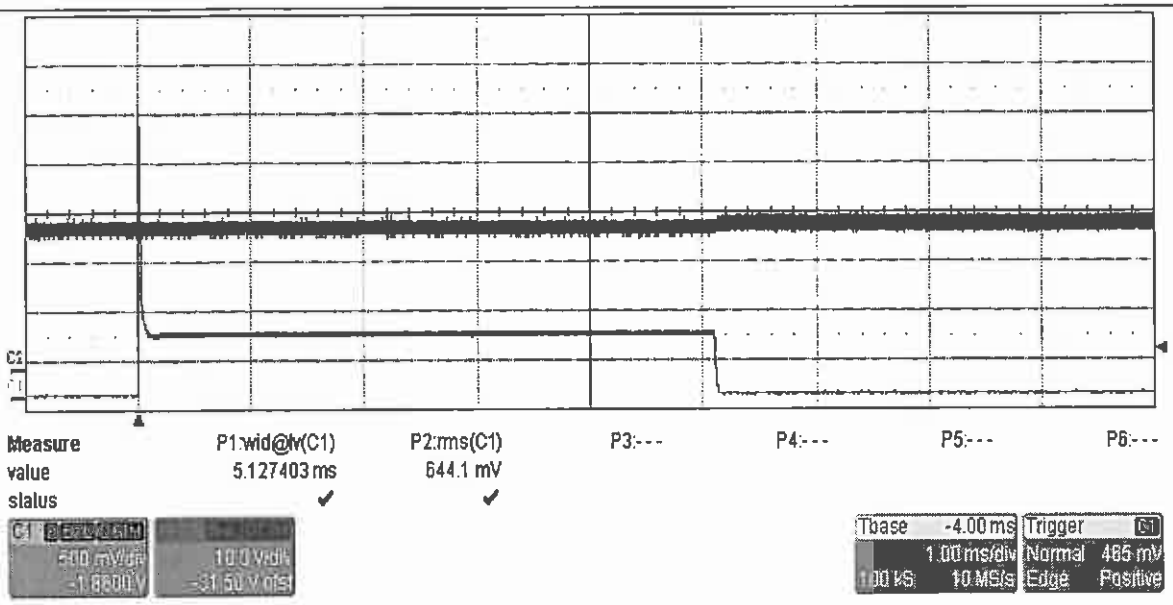
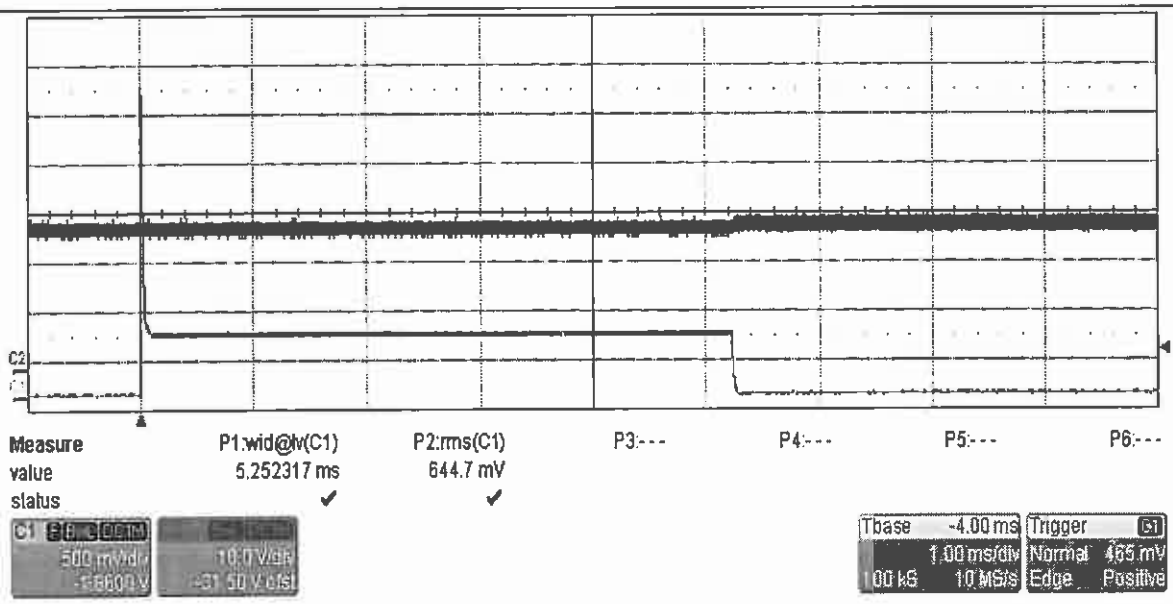


C1= I 5A/div

C2 = 28V

Annex_ 21



C1= I 5A/div

C2 = 28V

Annex_ 22

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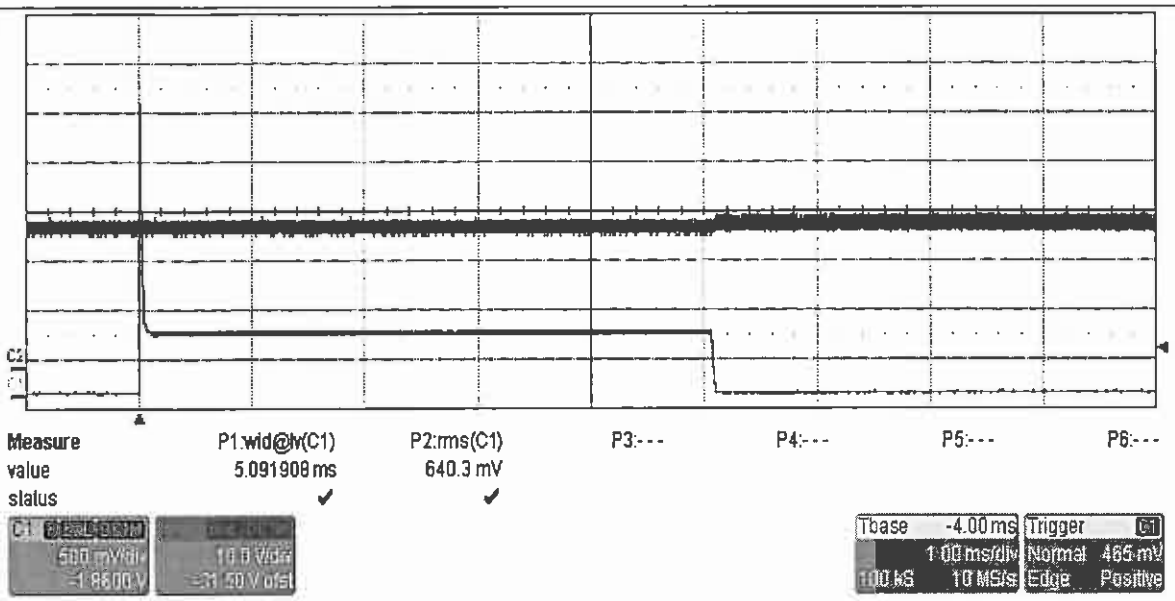
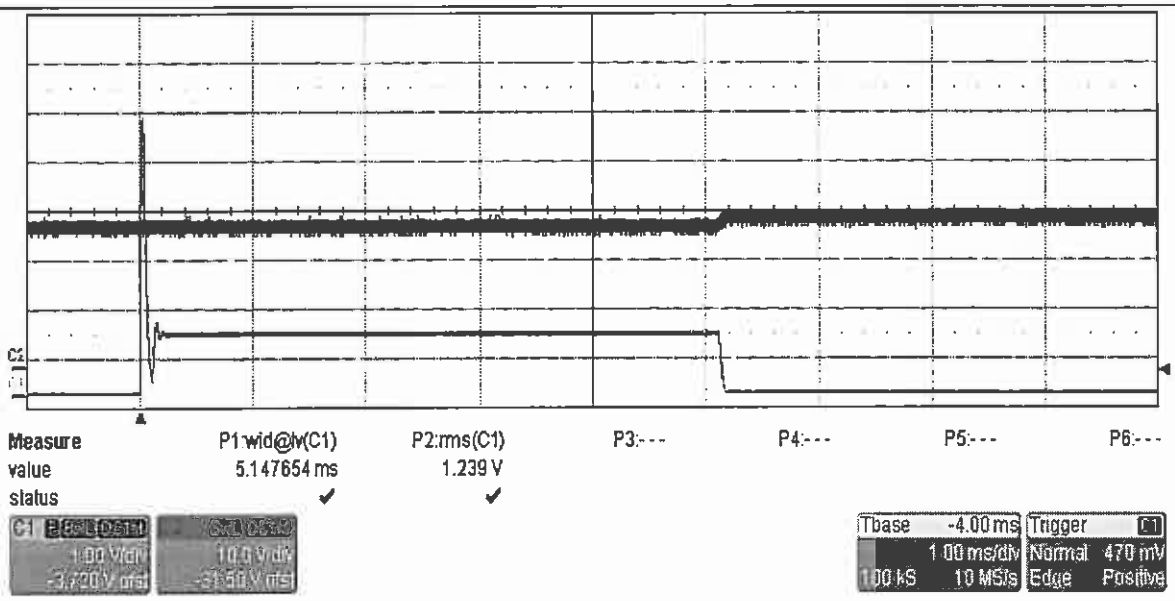


C1= I 5A/div

C2 = 28V

Annex_ 23



C1= I 10A/div

C2 = 28V

Annex_ 24

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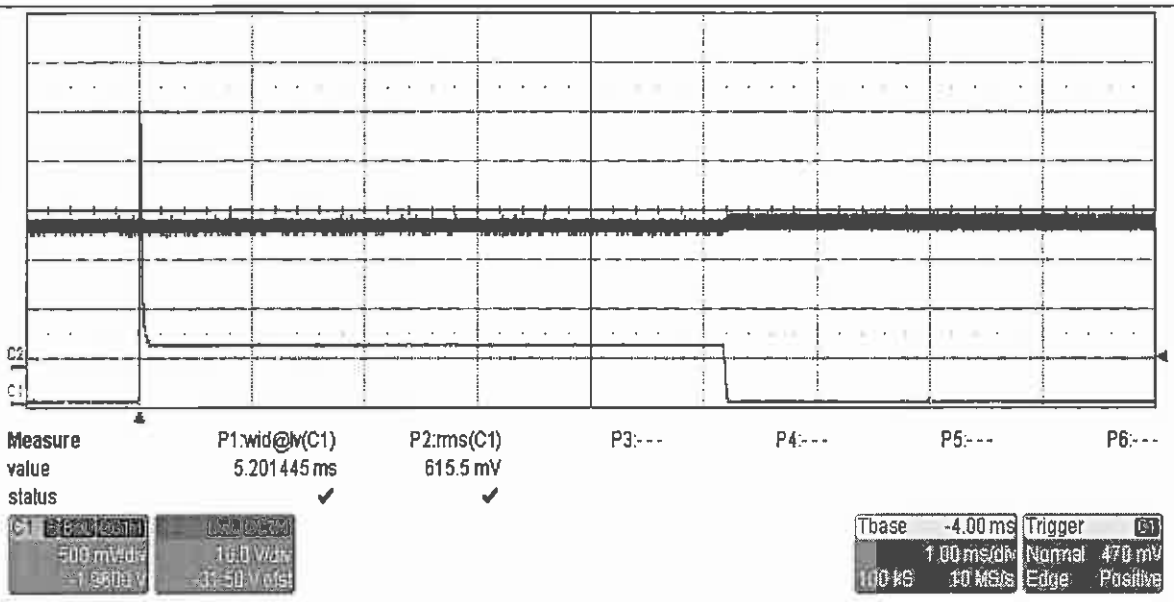
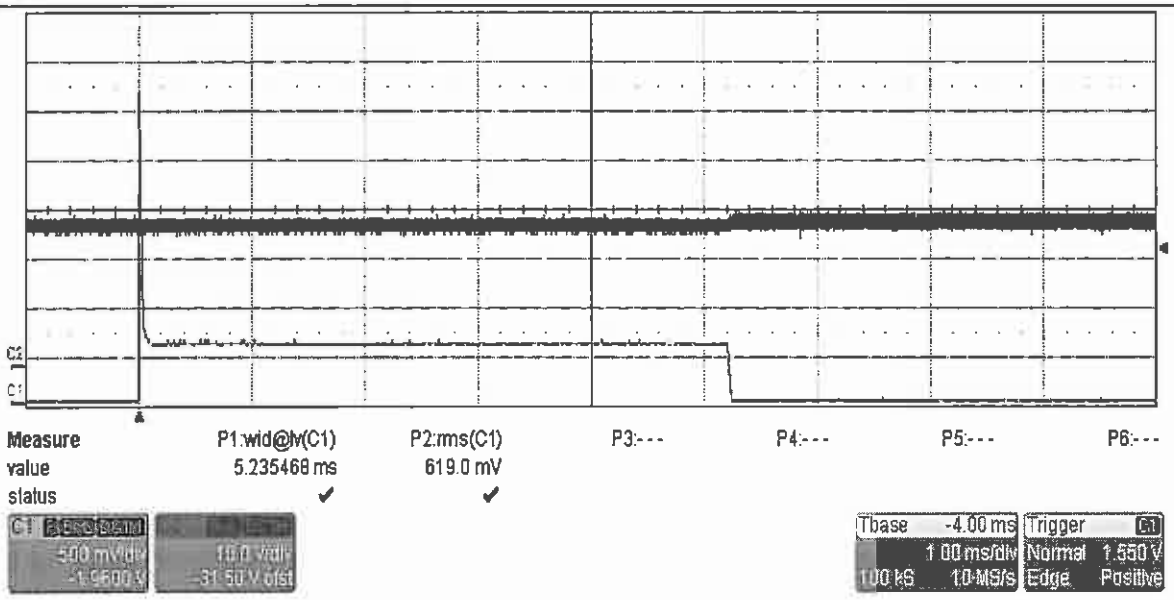


C1= I 5A/div

C2 = 28V

Annex_ 25



C1= I 5A/div

C2 = 28V

Annex_ 26

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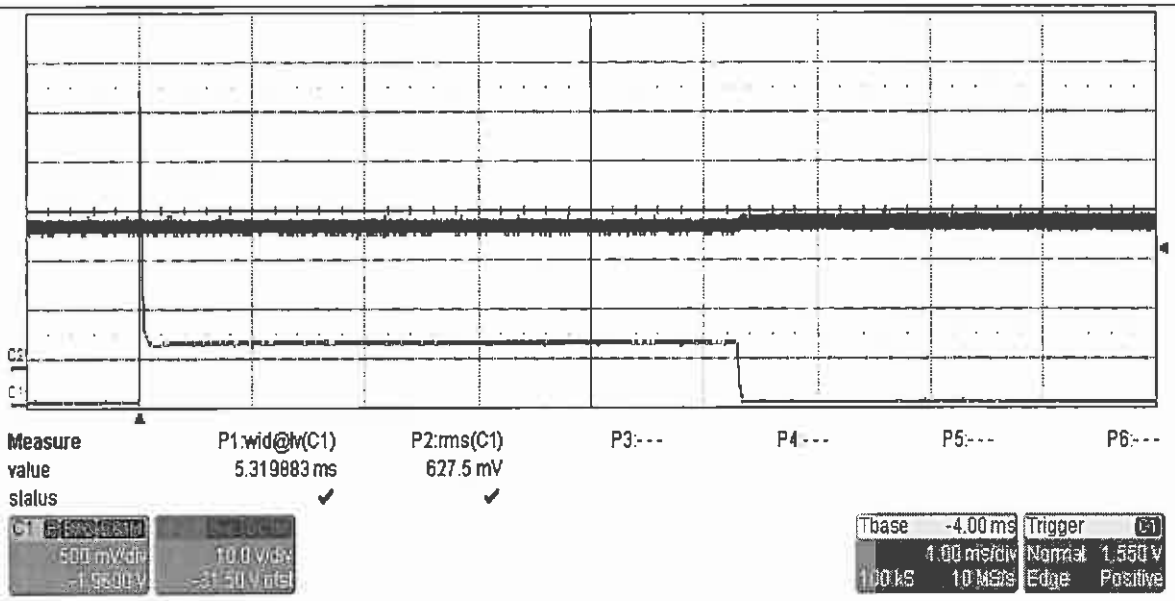
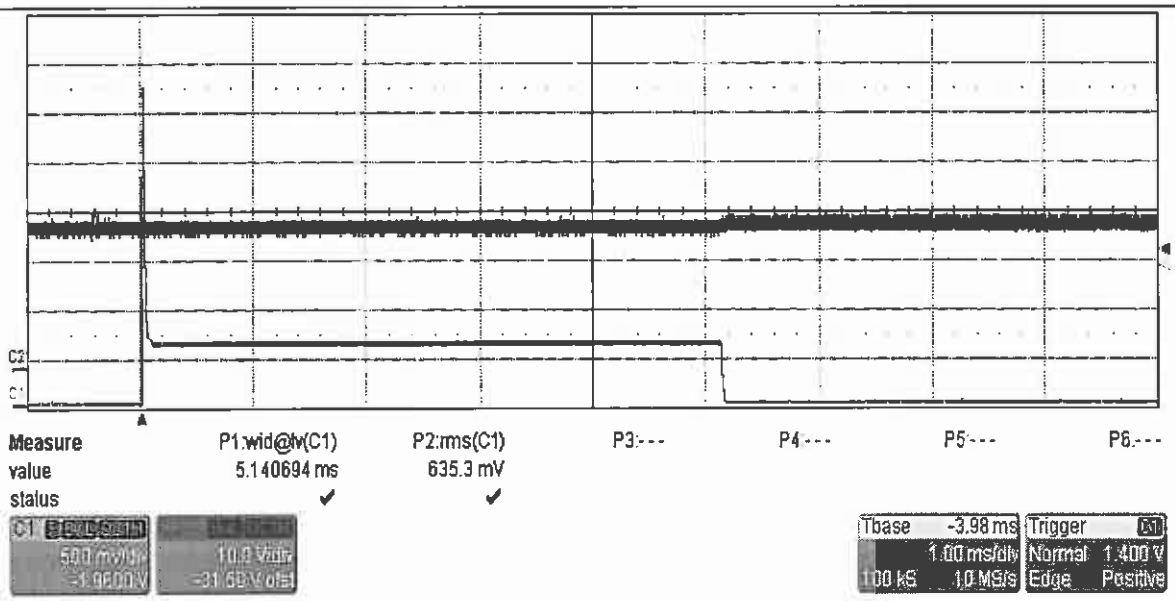


C1= I 5A/div

C2 = 28V

Annex_ 27



C1= I 5A/div

C2 = 28V

Annex_ 28

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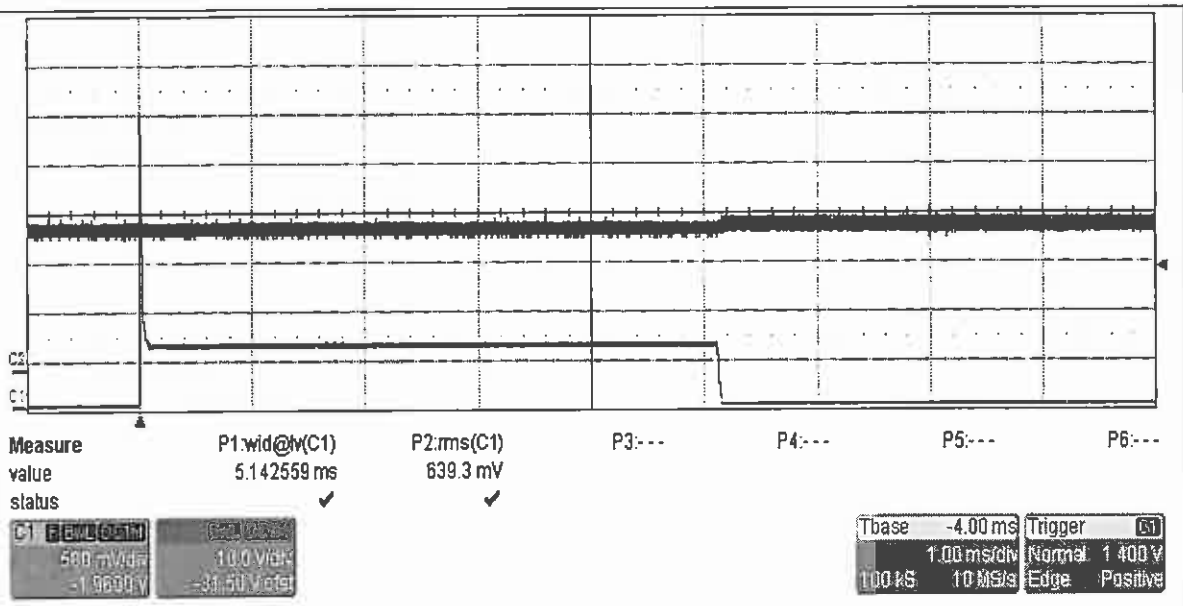
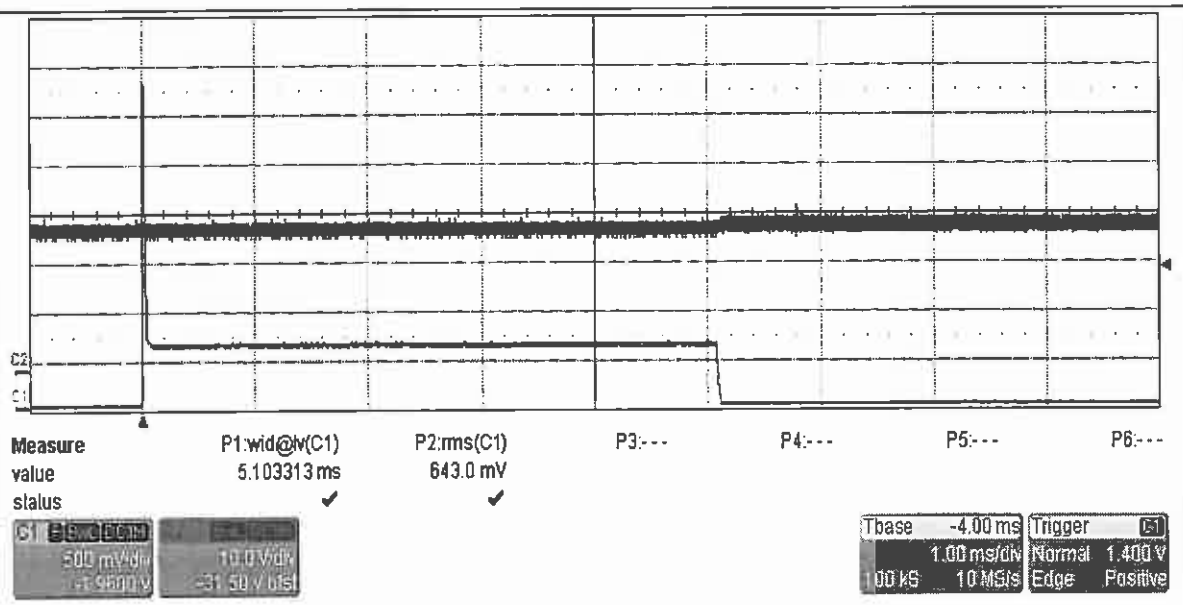


C1= I 5A/div

C2 = 28V

Annex_ 29



C1= I 5A/div

C2 = 28V

Annex_ 30

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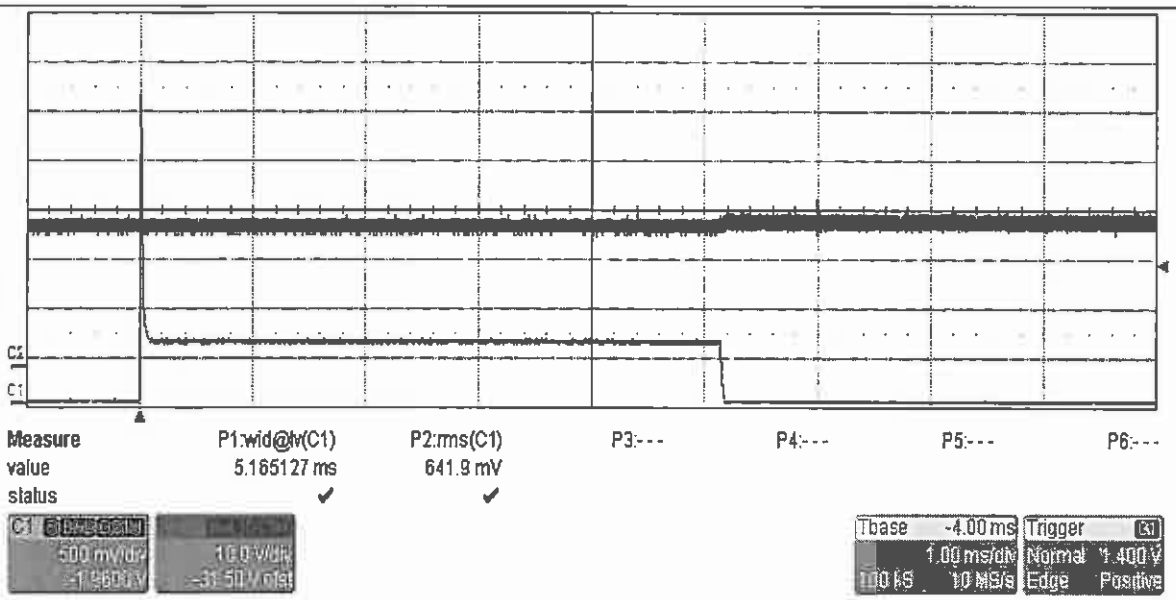
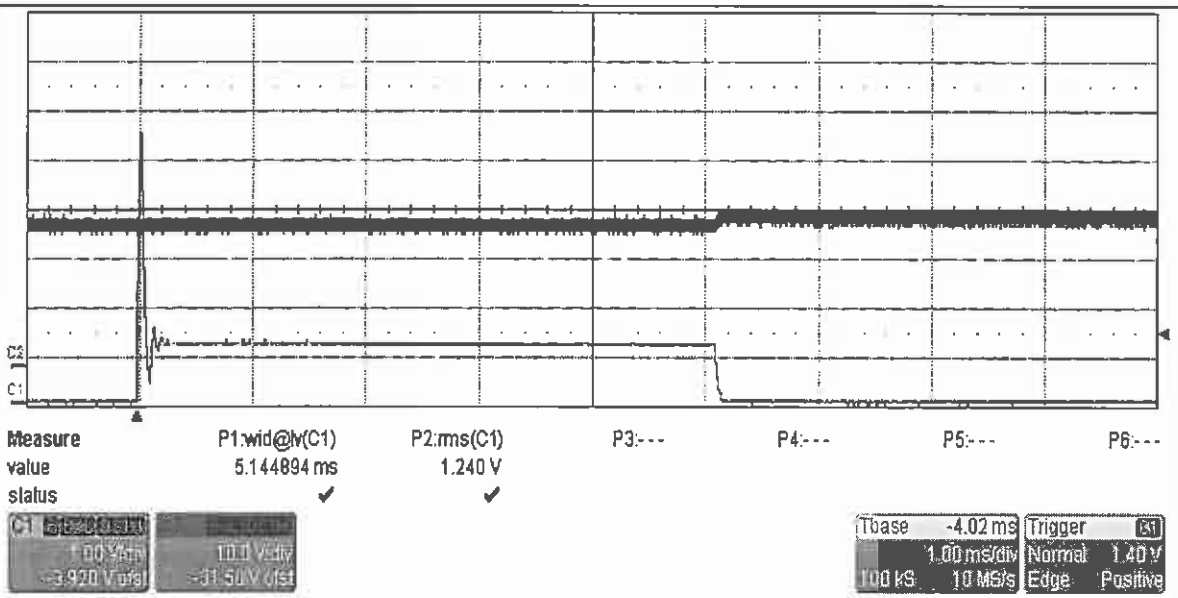


C1= I 5A/div

C2 = 28V

Annex_ 31



C1= I 10A/div

C2 = 28V

Annex_ 32

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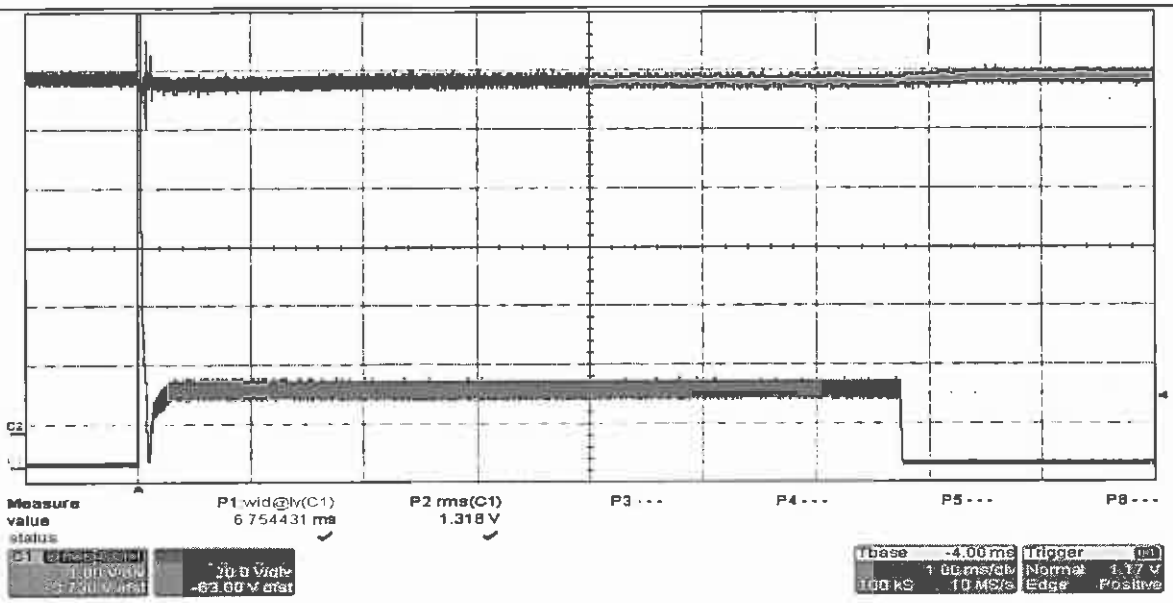
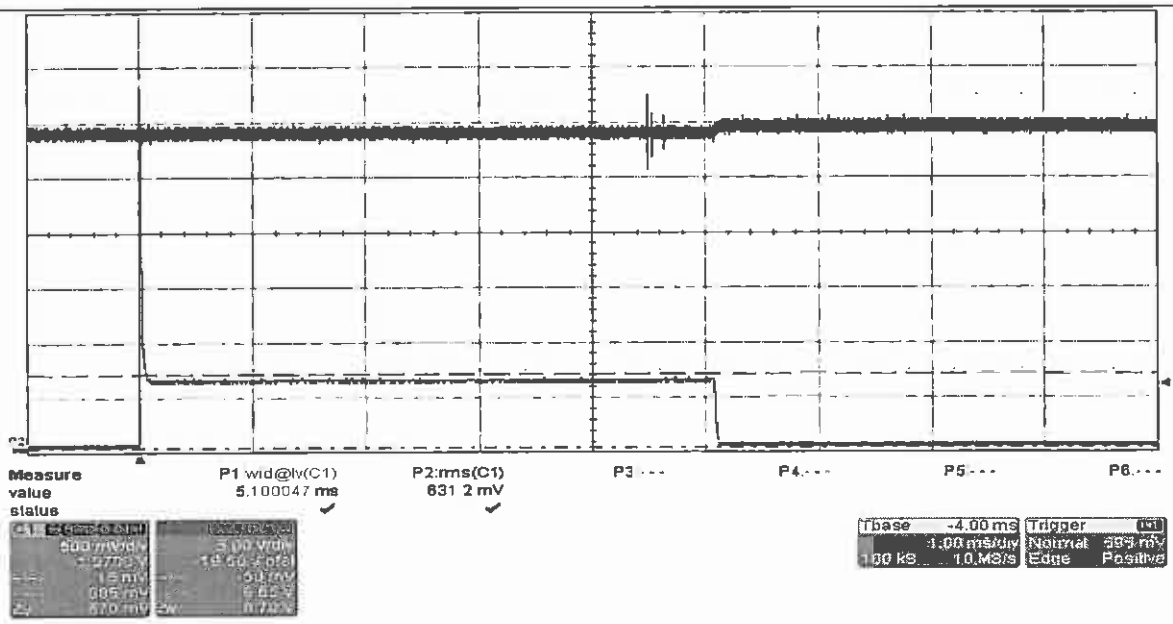


C1= I 10A/div

C2 = 120V

Annex_ 33



C1= I 5A/div

C2 = 28V

Annex_ 34

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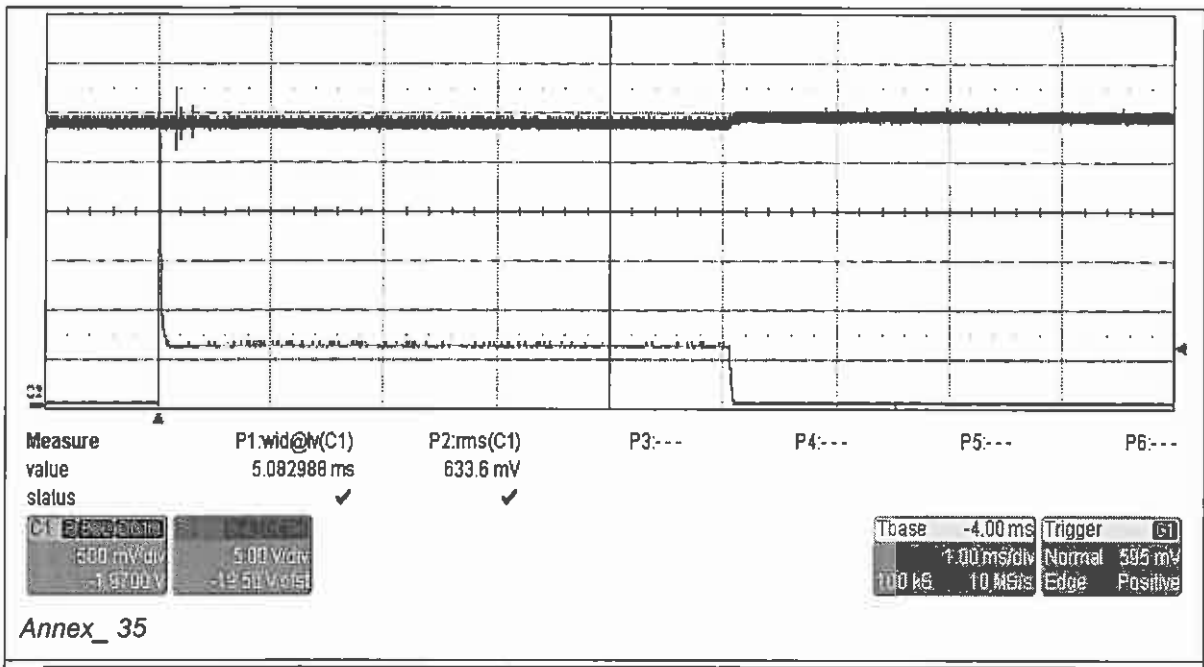
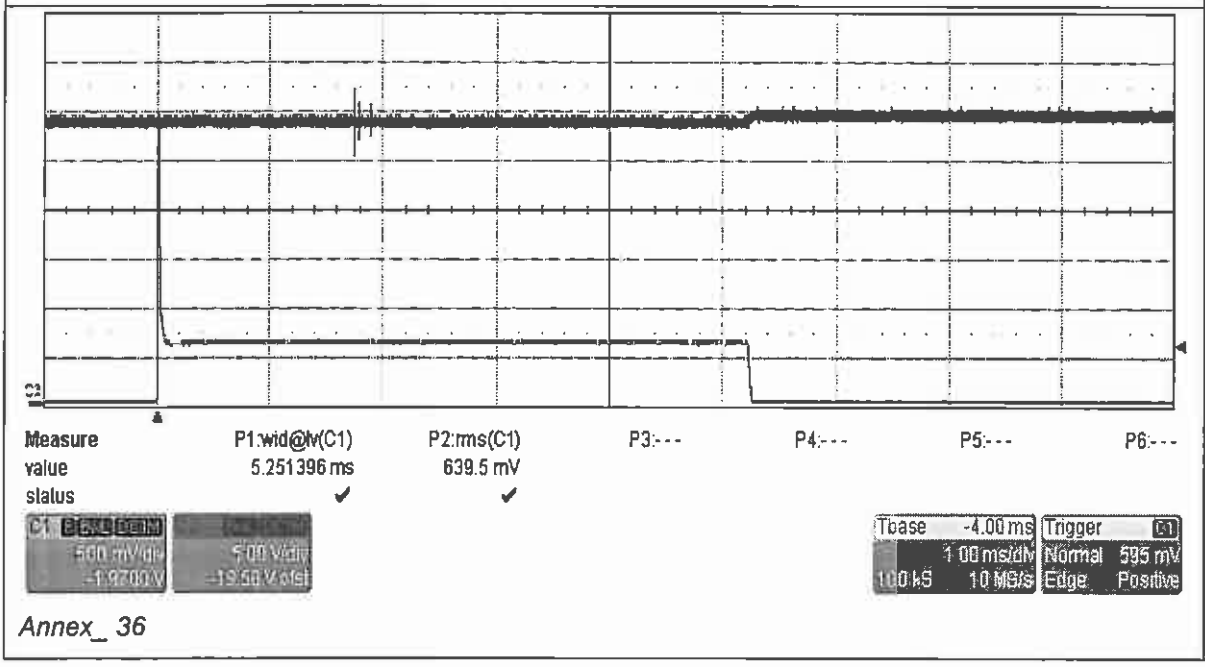


C1= I 5A/div

C2 = 28V

Annex_ 35



C1= I 5A/div

C2 = 28V

Annex_ 36

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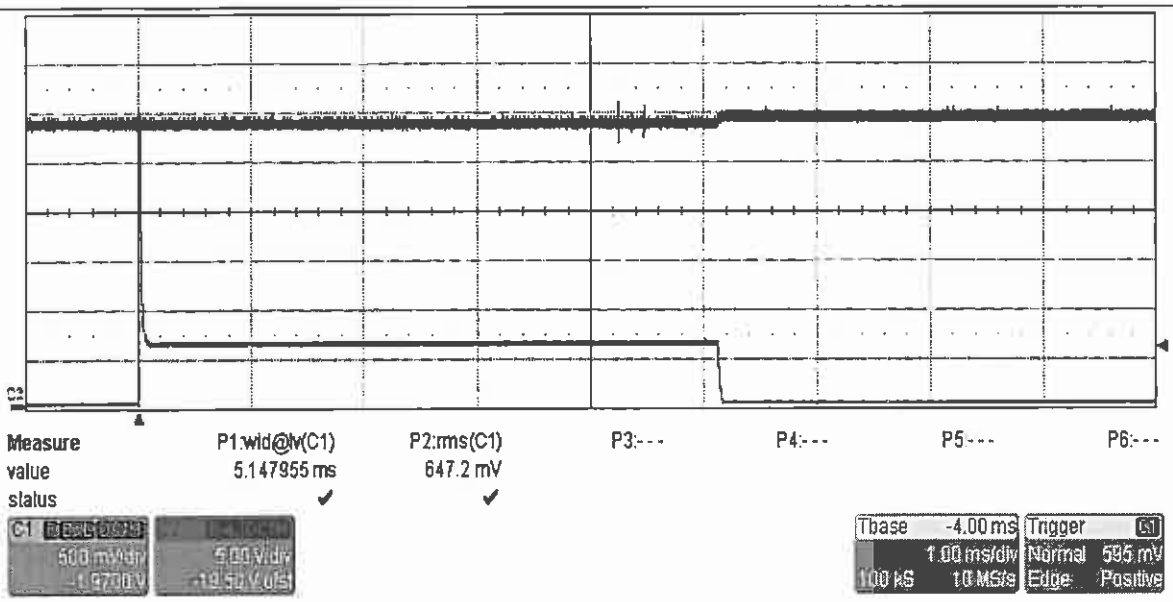
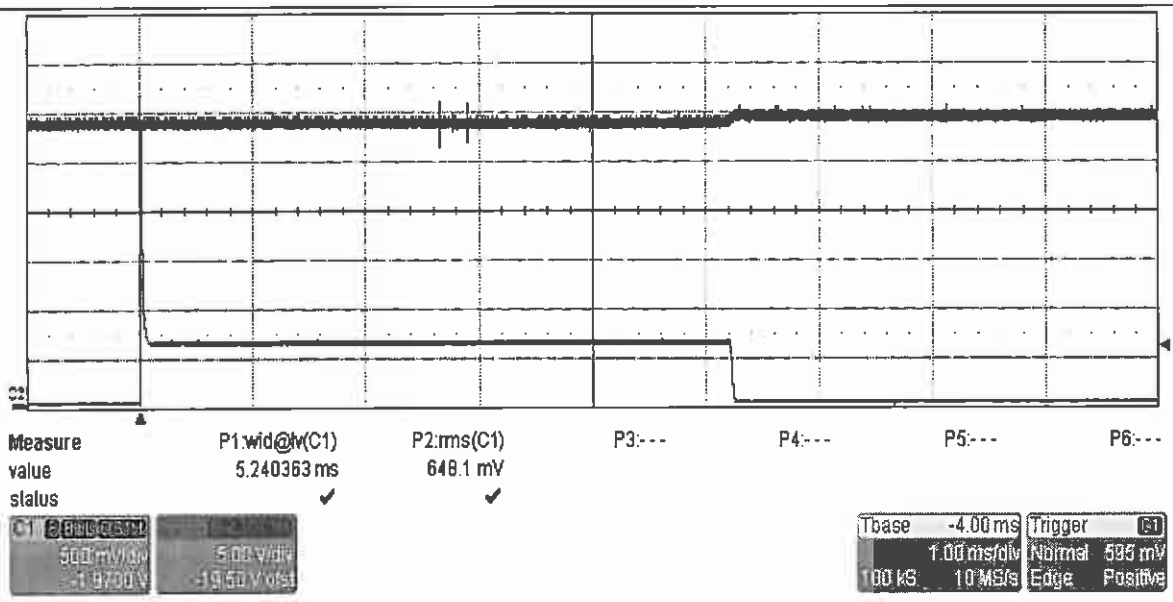


C1= I 5A/div

C2 = 28V

Annex_ 37



C1= I 5A/div

C2 = 28V

Annex_ 38

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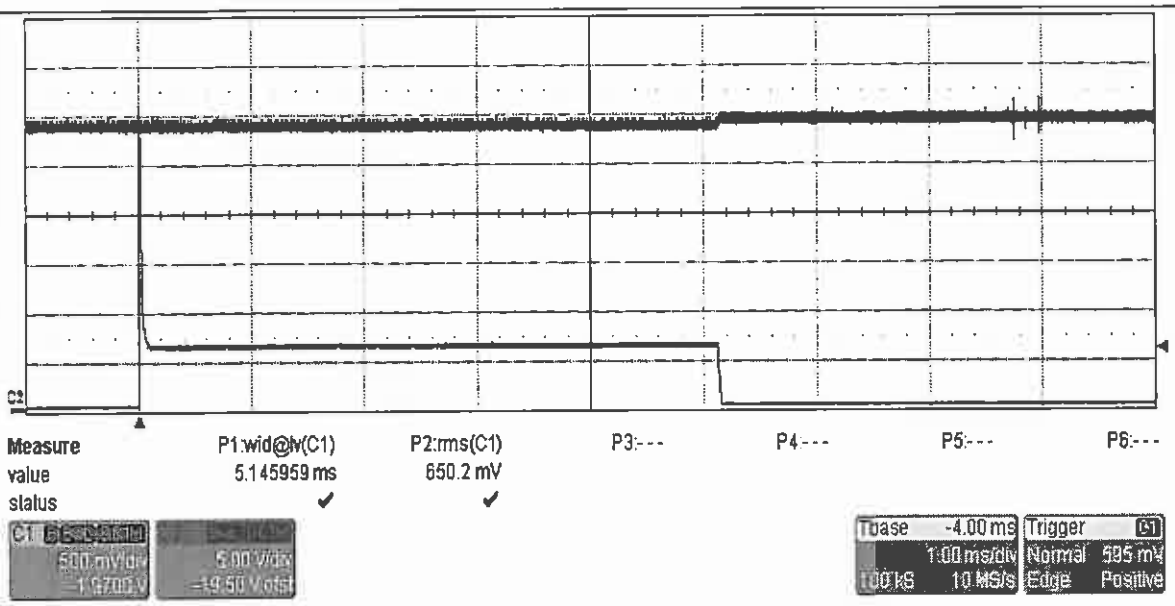
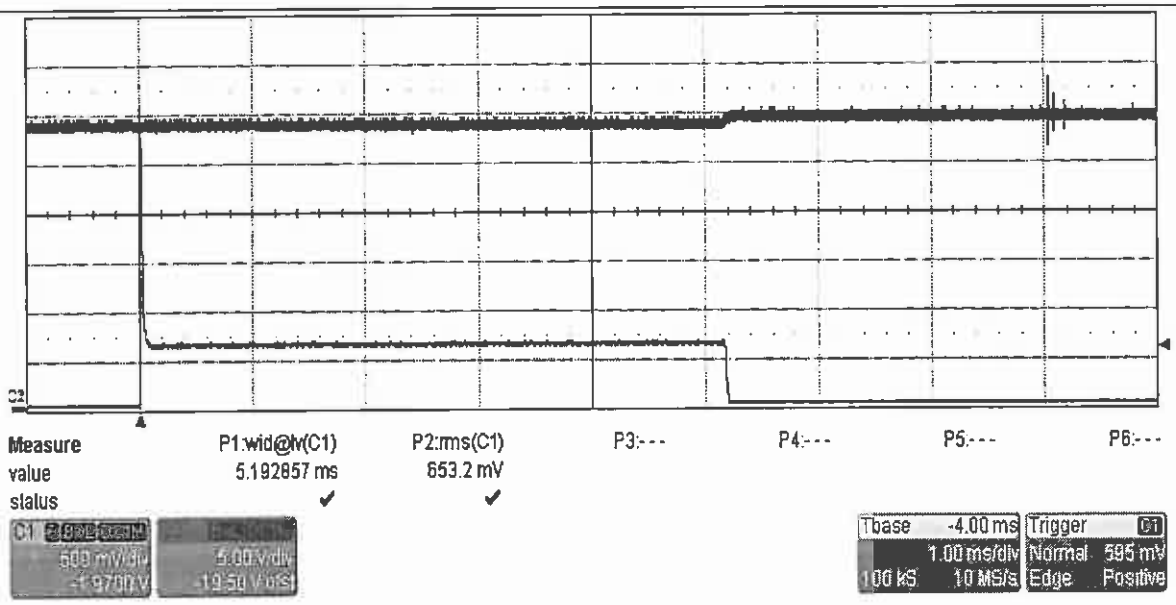


C1= I 5A/div

C2 = 28V

Annex_ 39



C1= I 5A/div

C2 = 28V

Annex_ 40

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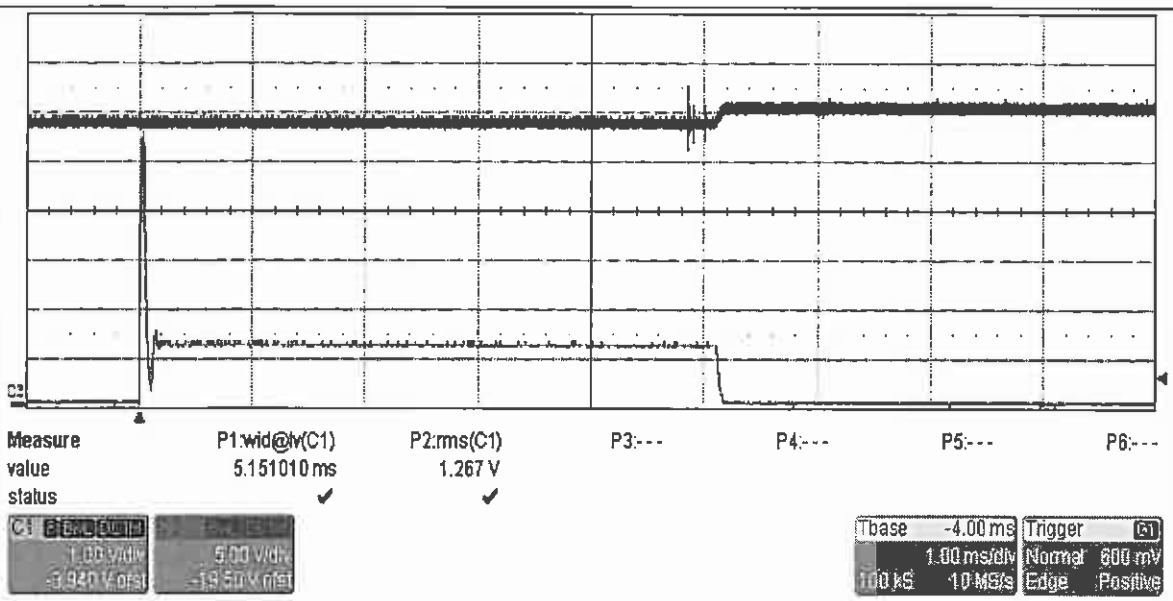
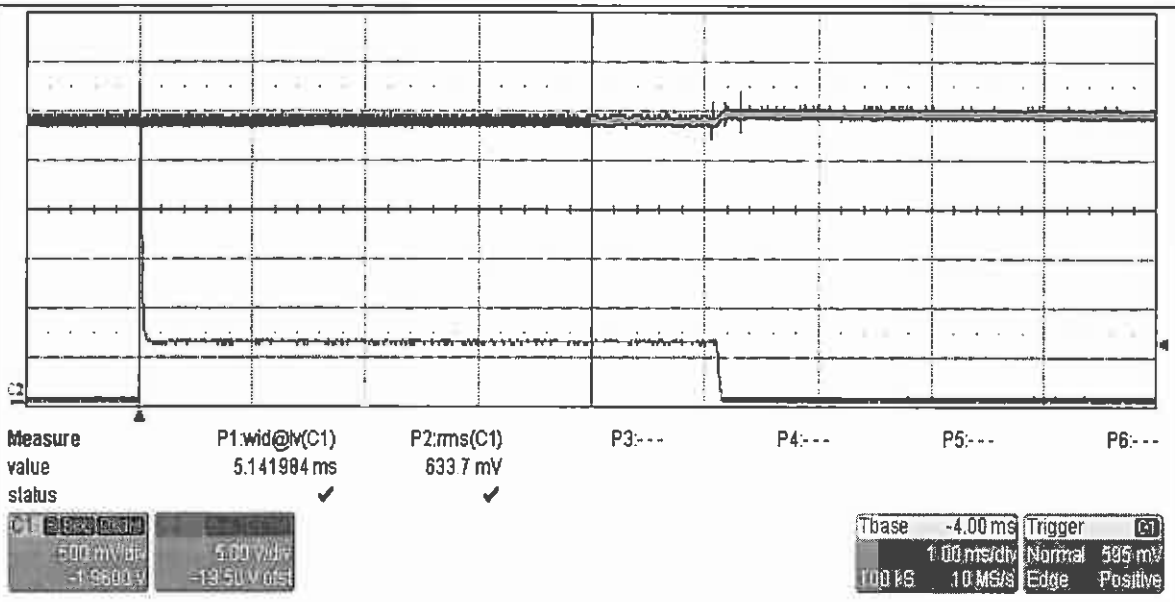


C1= I 10A/div

C2 = 28V

Annex_ 41



C1= I 5A/div

C2 = 28V

Annex_ 42

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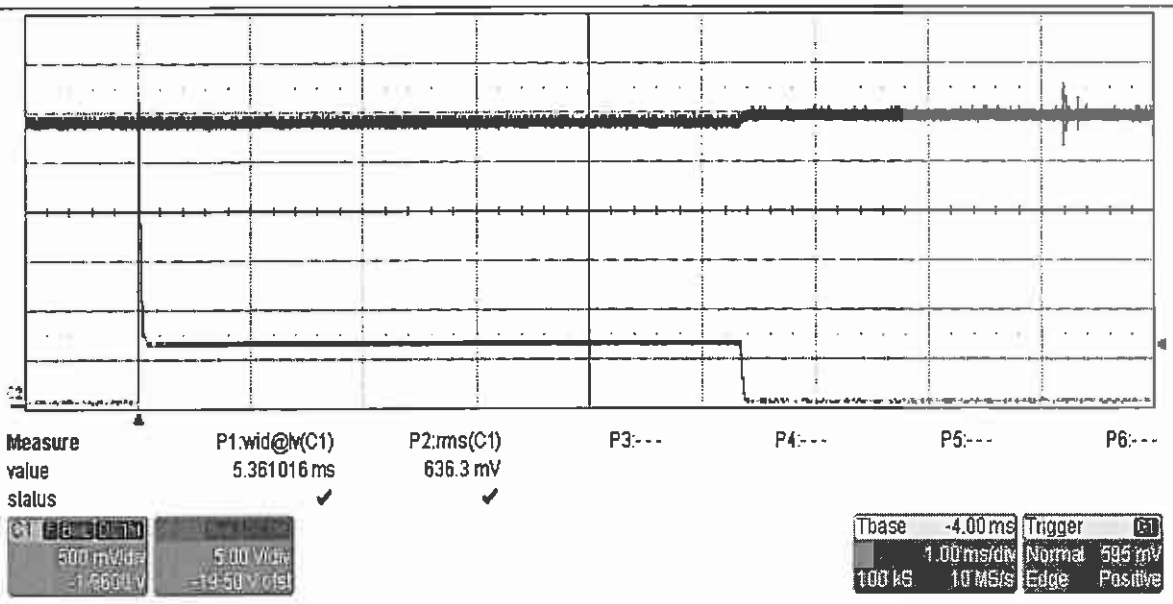
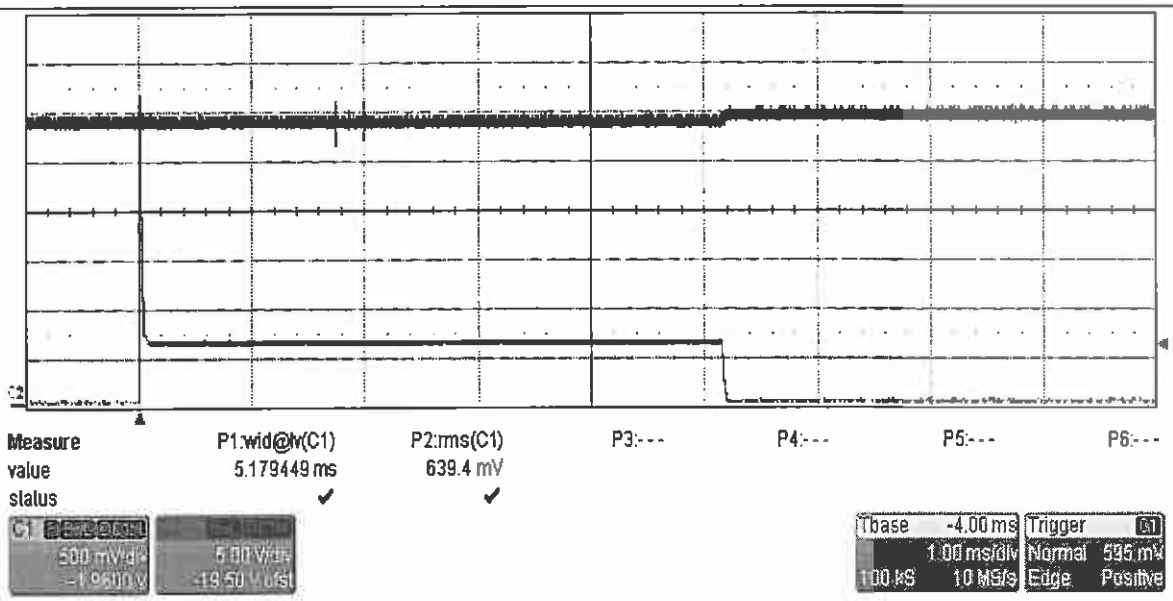


C1= I 5A/div

C2 = 28V

Annex_ 43



C1= I 5A/div

C2 = 28V

Annex_ 44

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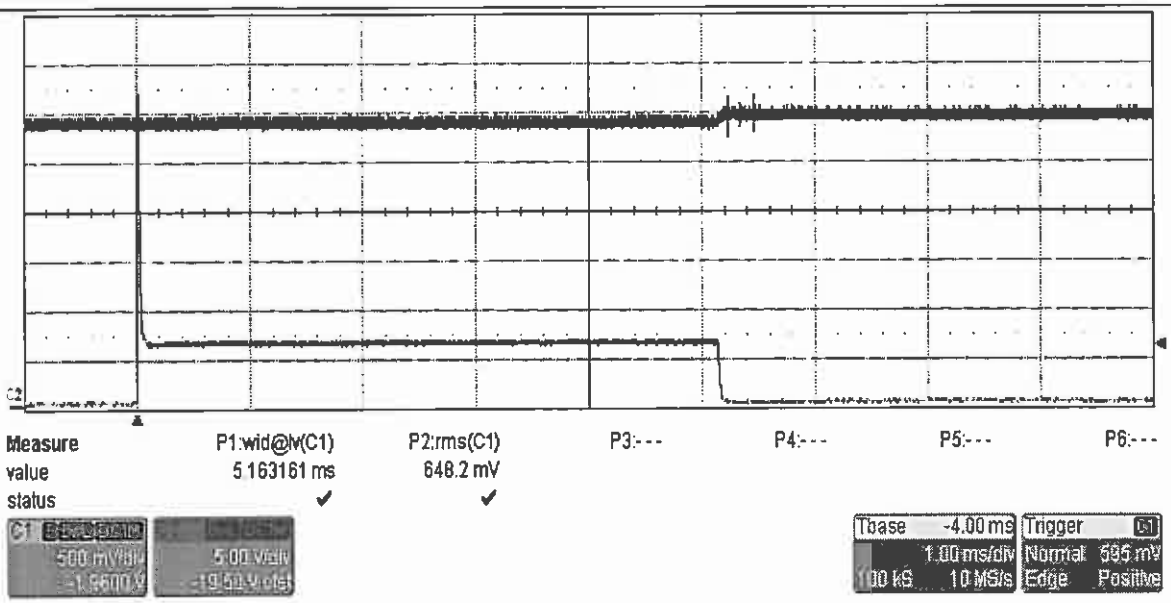
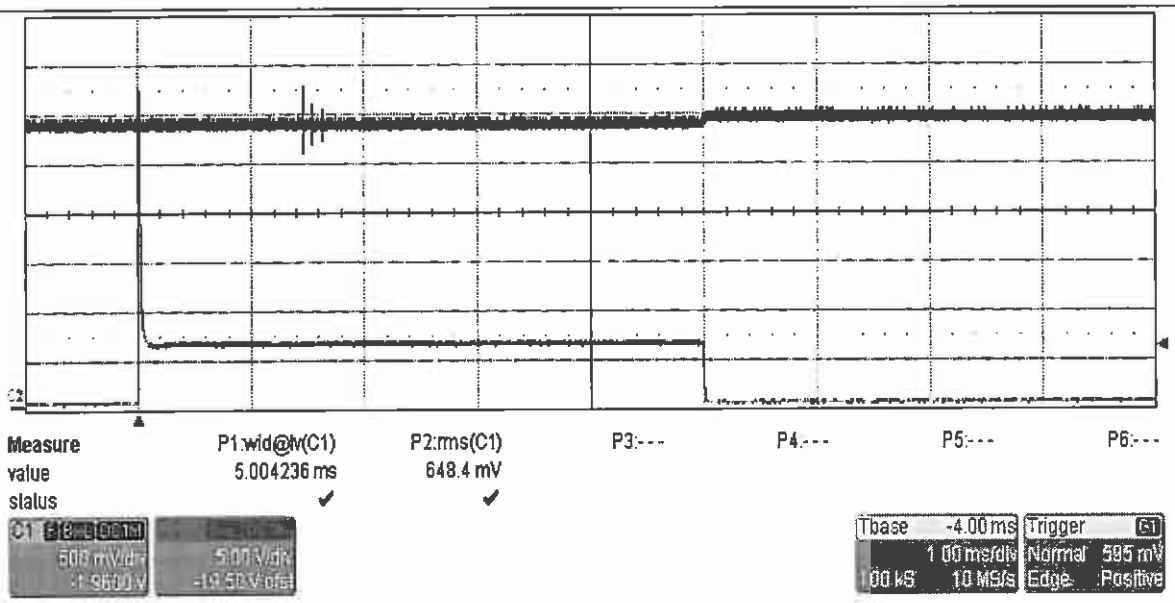


C1= I 5A/div

C2 = 28V

Annex_ 45



C1= I 5A/div

C2 = 28V

Annex_ 46

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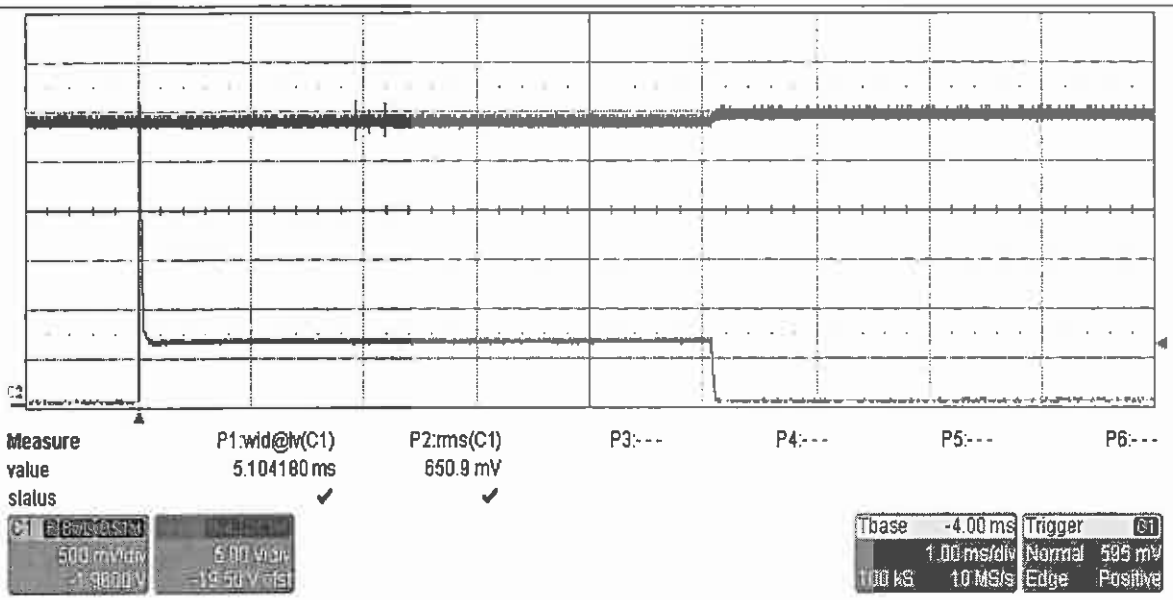
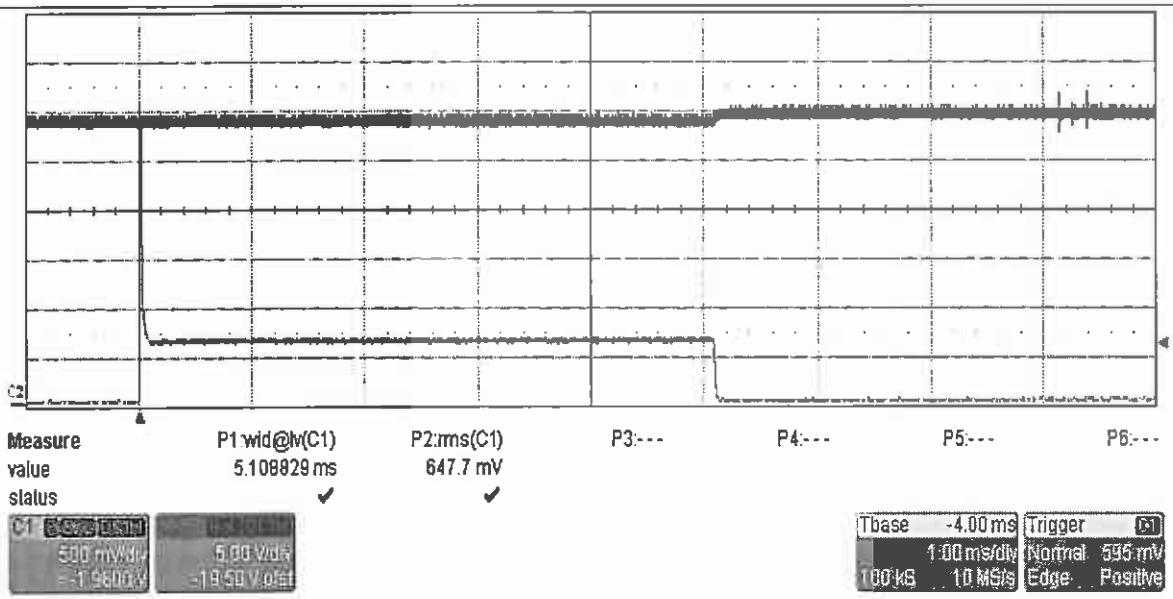


C1= I 5A/div

C2 = 28V

Annex_ 47



C1= I 5A/div

C2 = 28V

Annex_ 48

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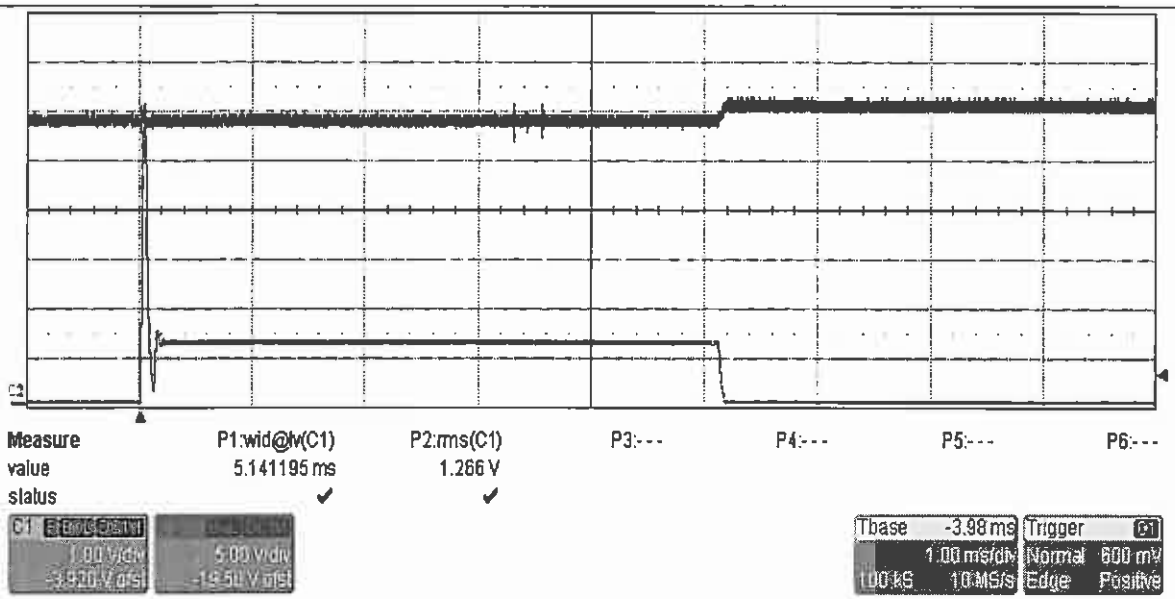
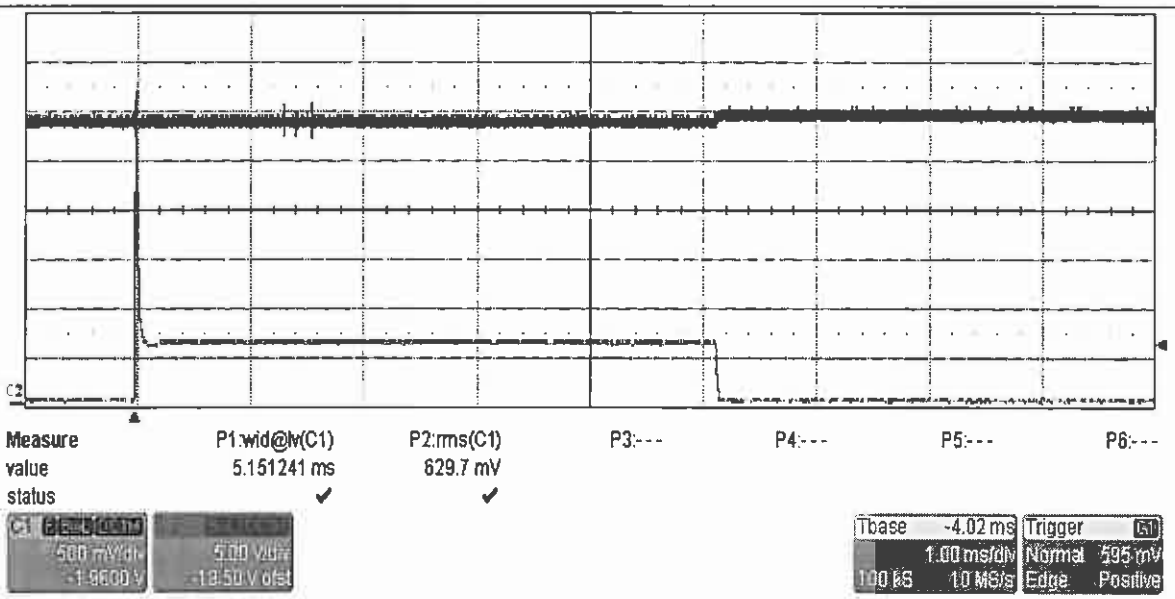


C1= I 10A/div

C2 = 28V

Annex_ 49



C1= I 5A/div

C2 = 28V

Annex_ 50

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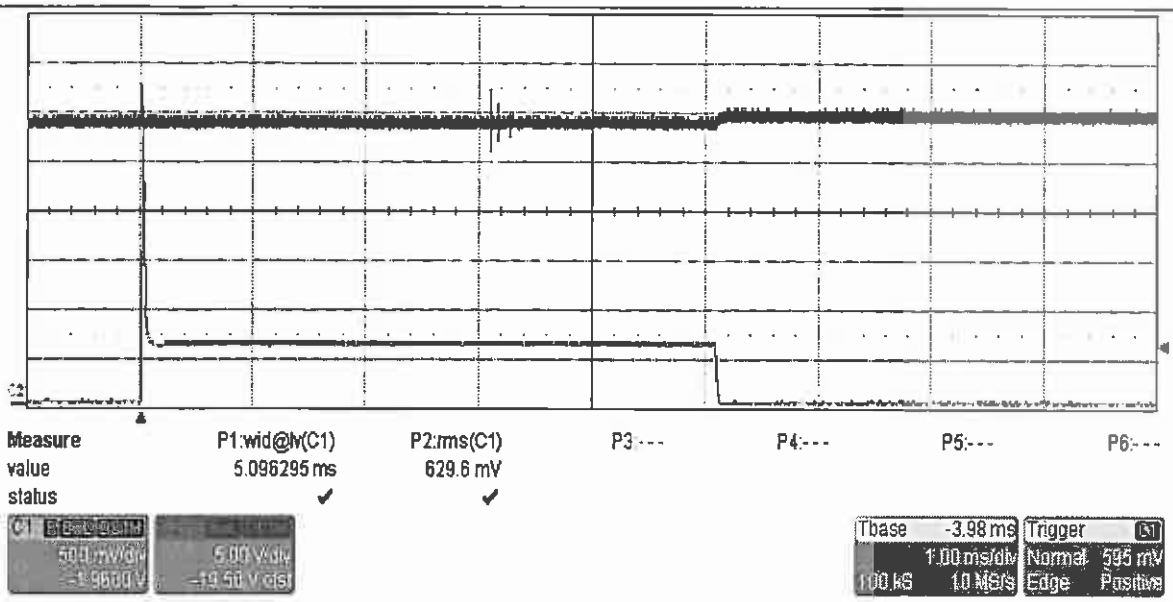
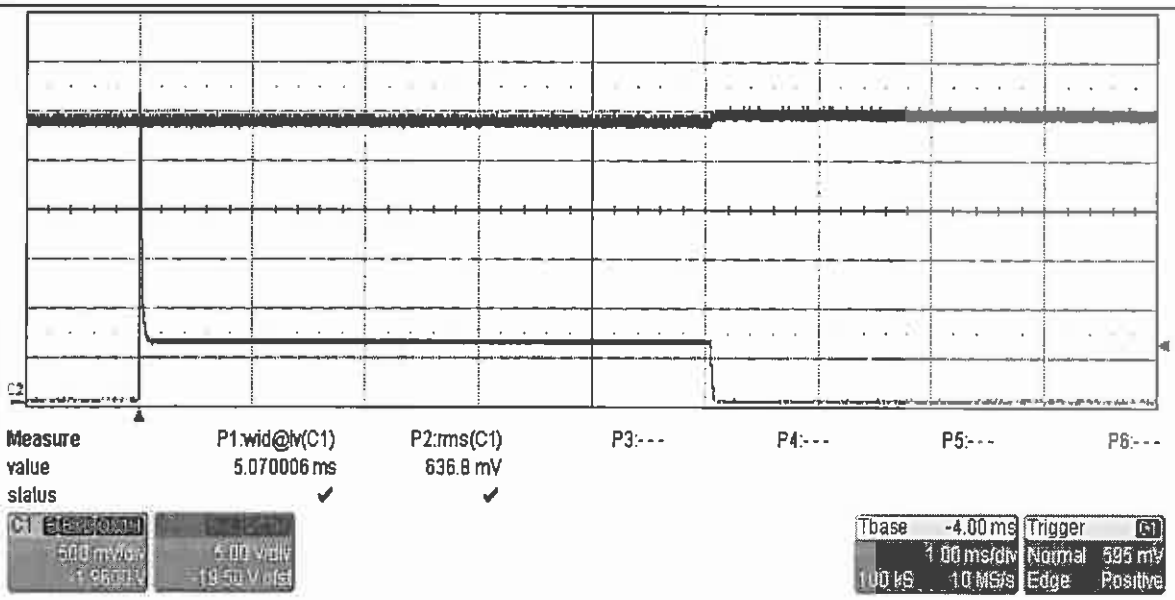


C1= I 5A/div

C2 = 28V

Annex_ 51



C1= I 5A/div

C2 = 28V

Annex_ 52

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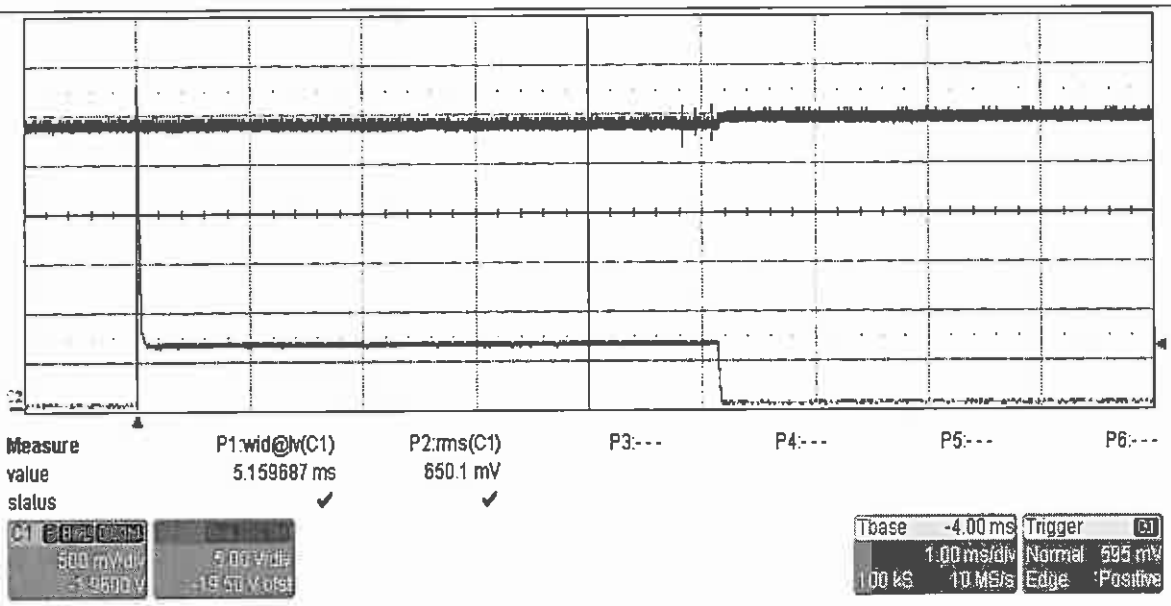
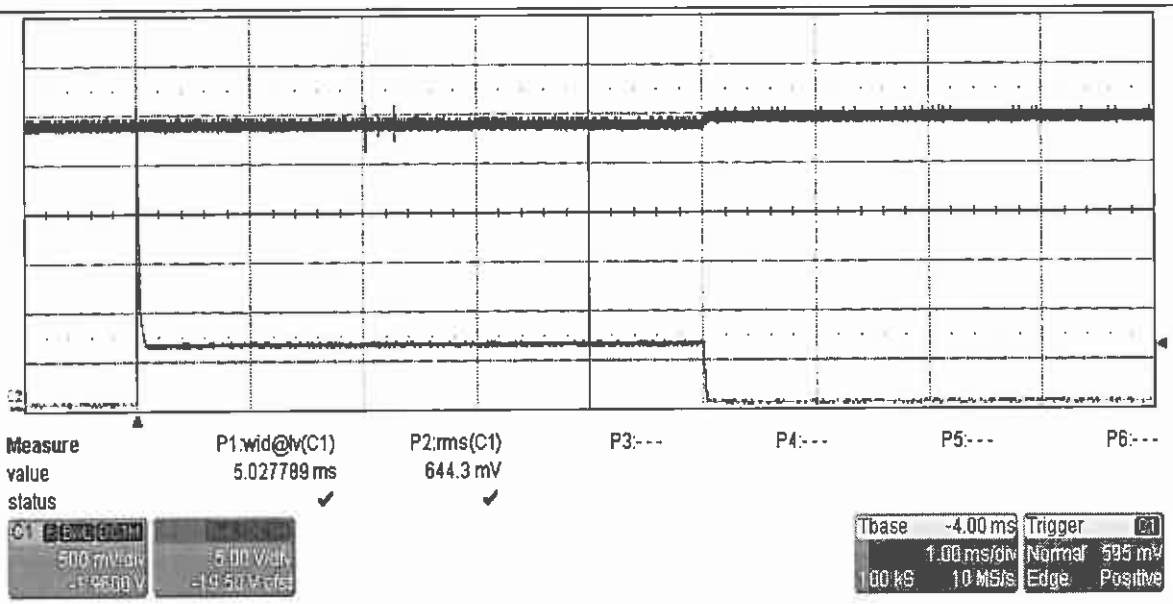


C1= I 5A/div

C2 = 28V

Annex_ 53



C1= I 5A/div

C2 = 28V

Annex_ 54

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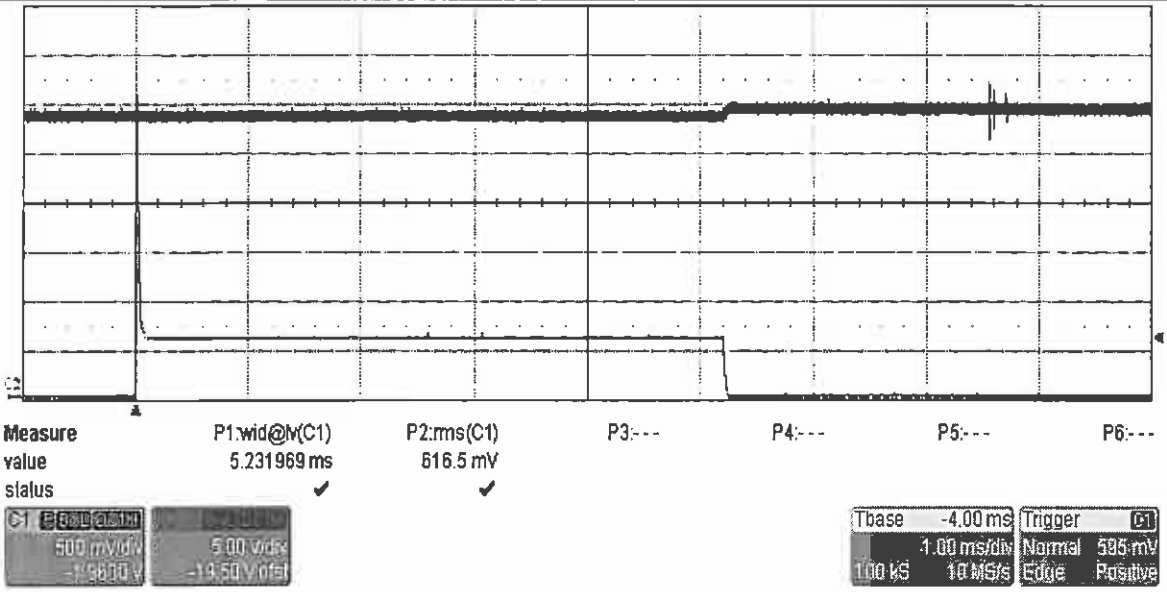
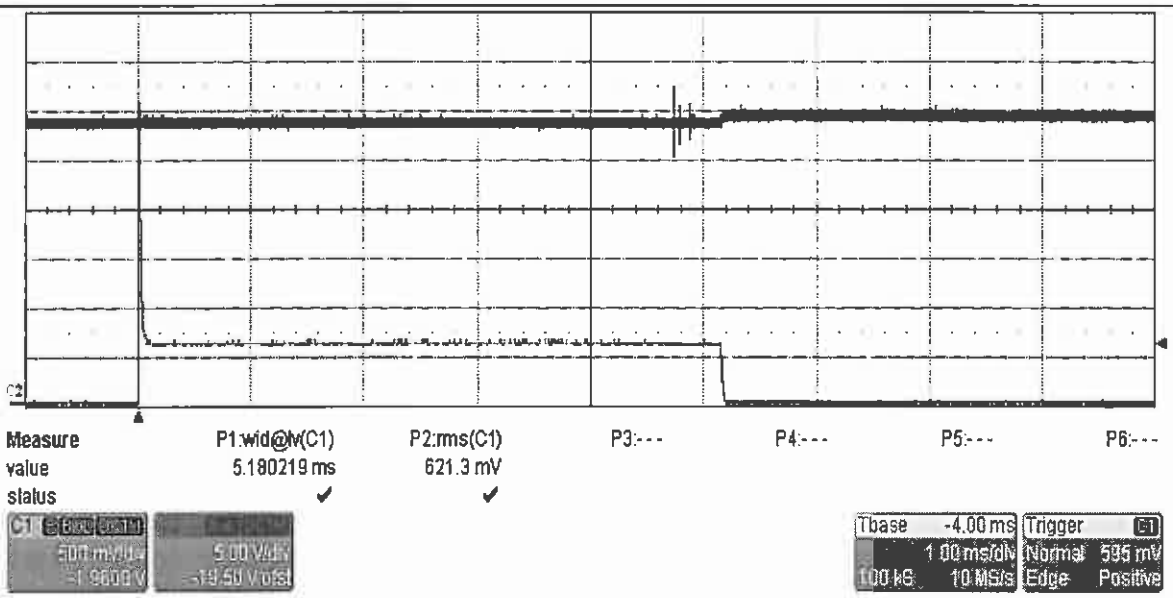


C1= I 5A/div

C2 = 28V

Annex_ 55



C1= I 5A/div

C2 = 28V

Annex_ 56

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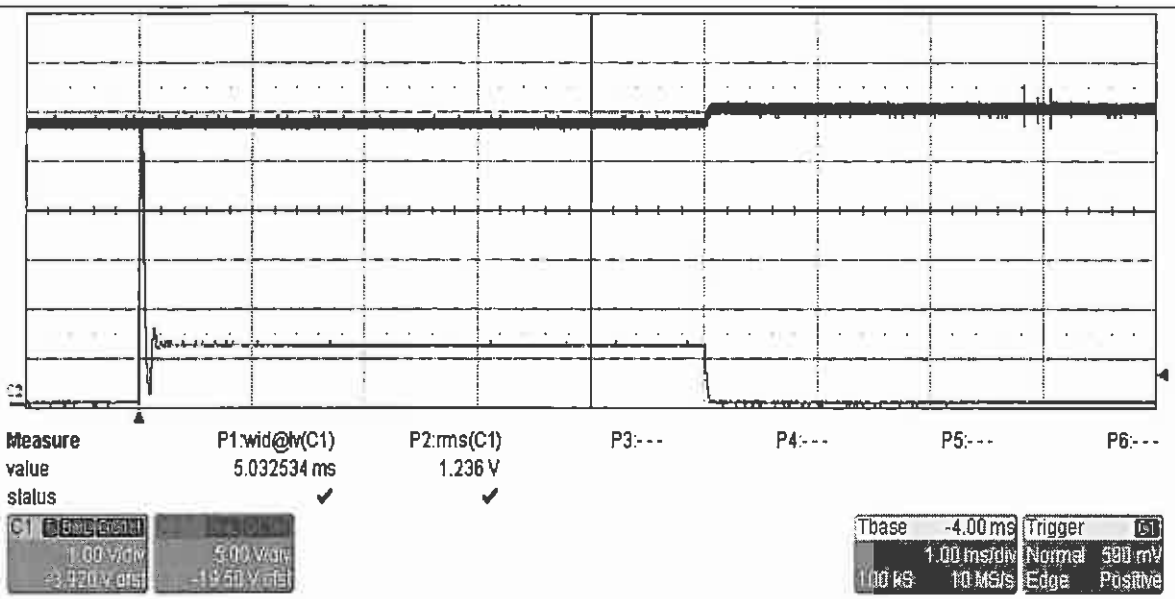
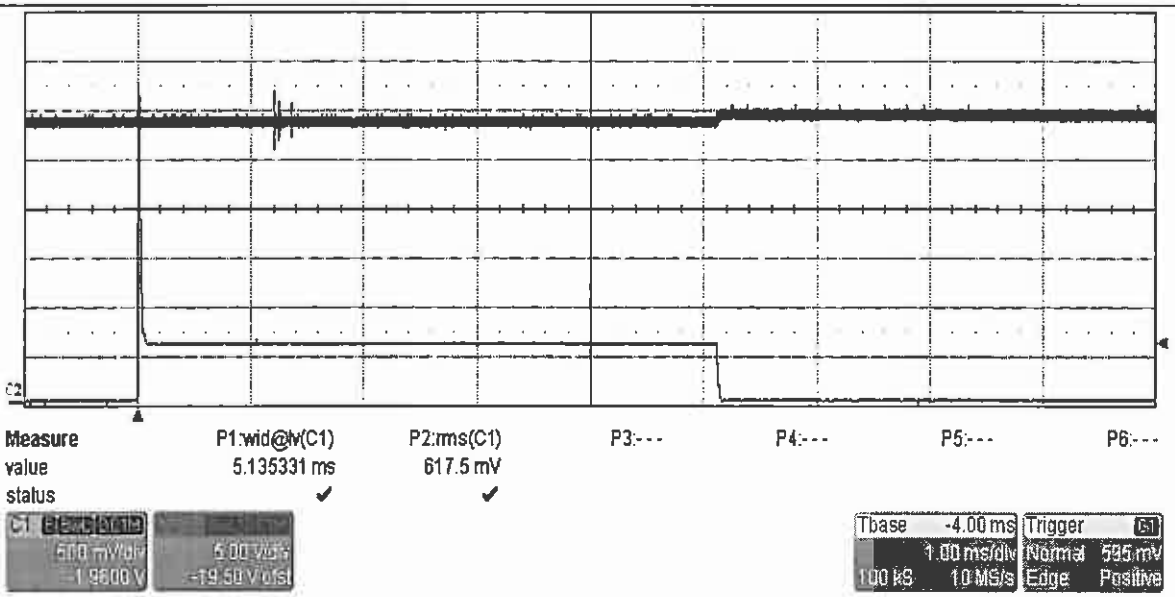


C1= I 10A/div

C2 = 28V

Annex_ 57



C1= I 5A/div

C2 = 28V

Annex_ 58

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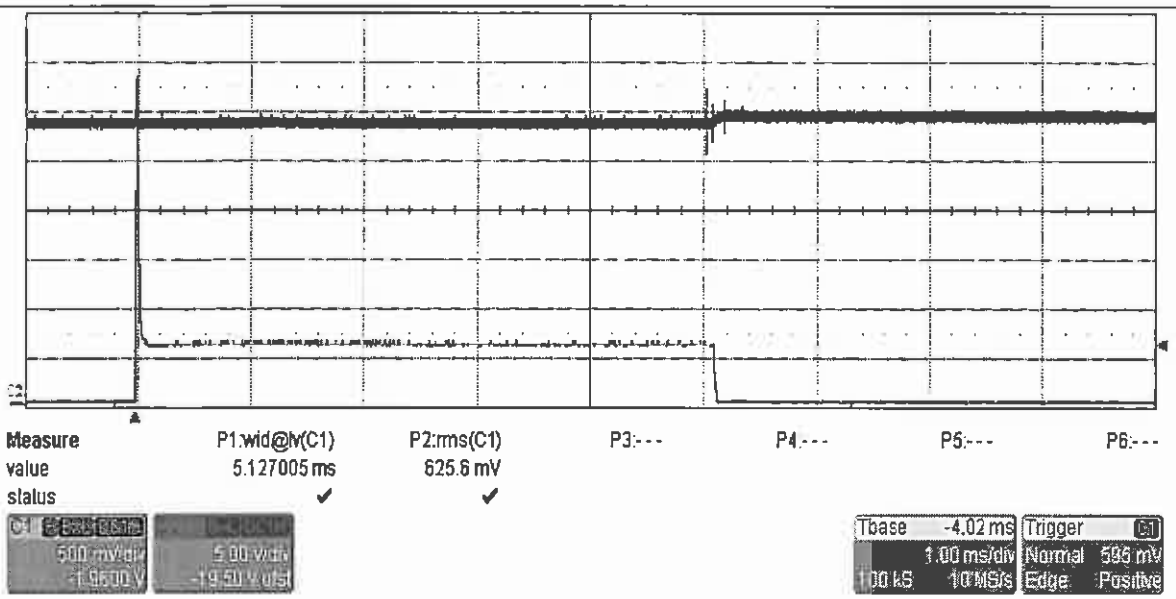
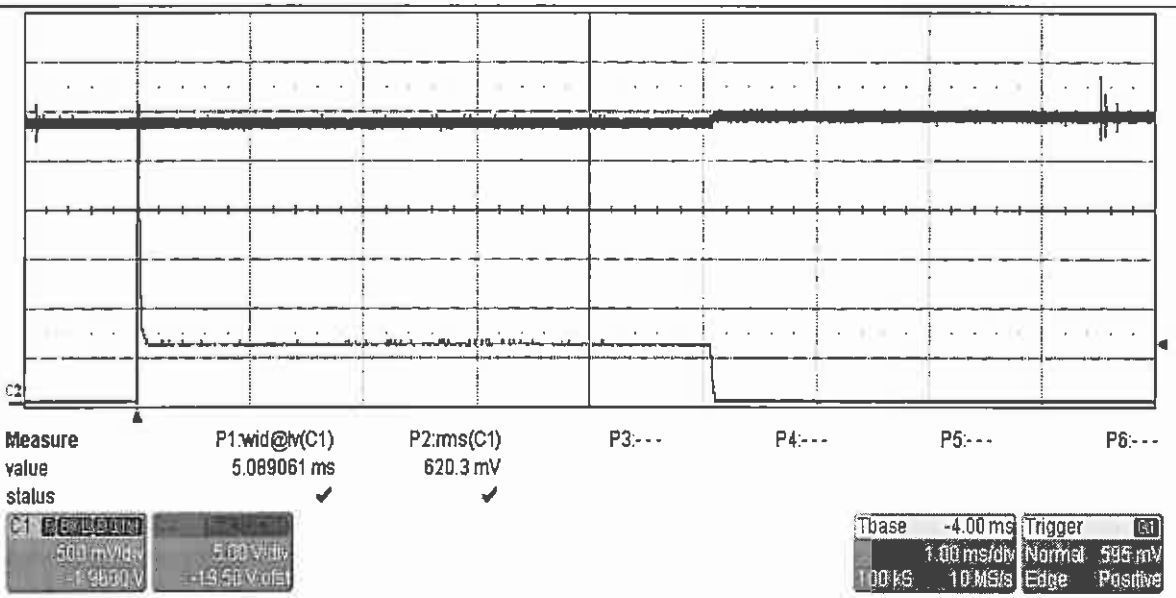


C1= I 5A/div

C2 = 28V

Annex_ 59



C1= I 5A/div

C2 = 28V

Annex_ 60

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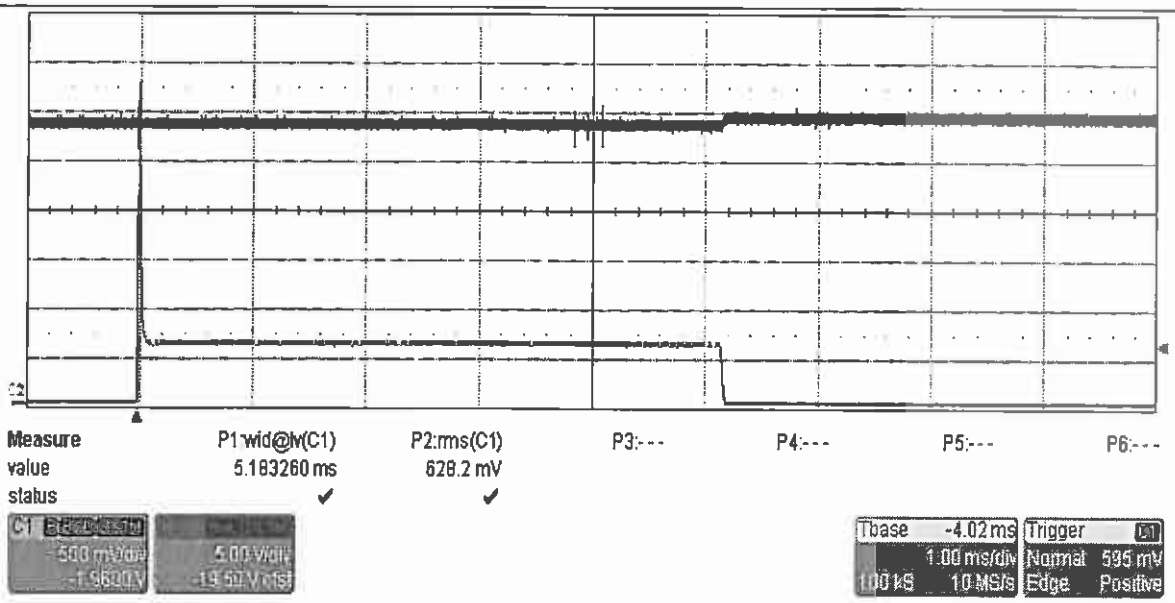
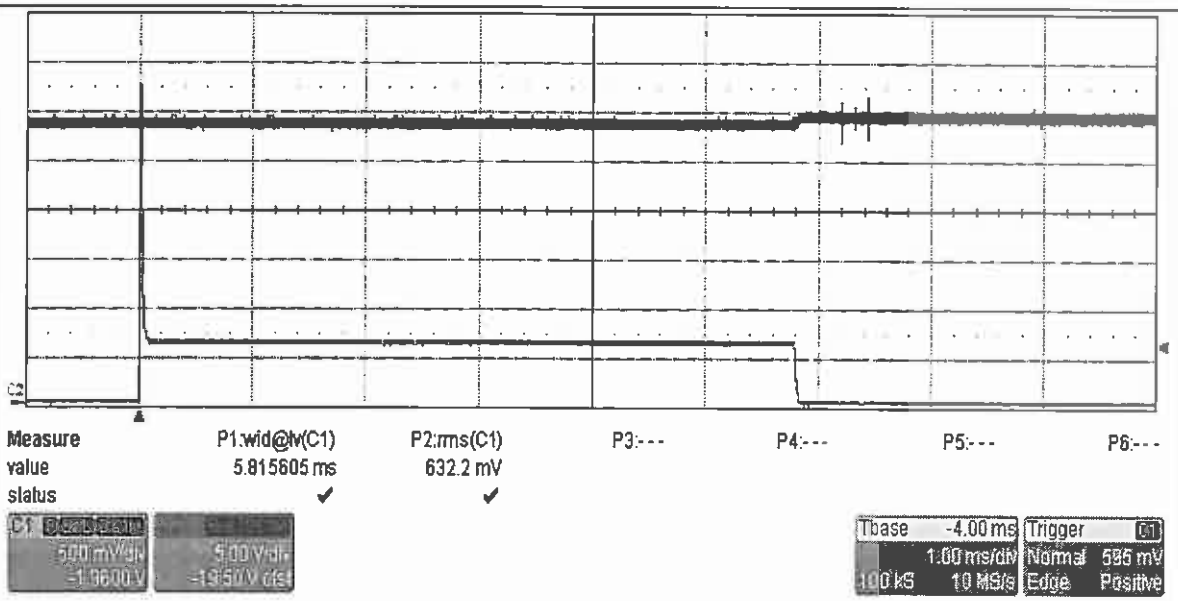


C1= I 5A/div

C2 = 28V

Annex_ 61



C1= I 5A/div

C2 = 28V

Annex_ 62

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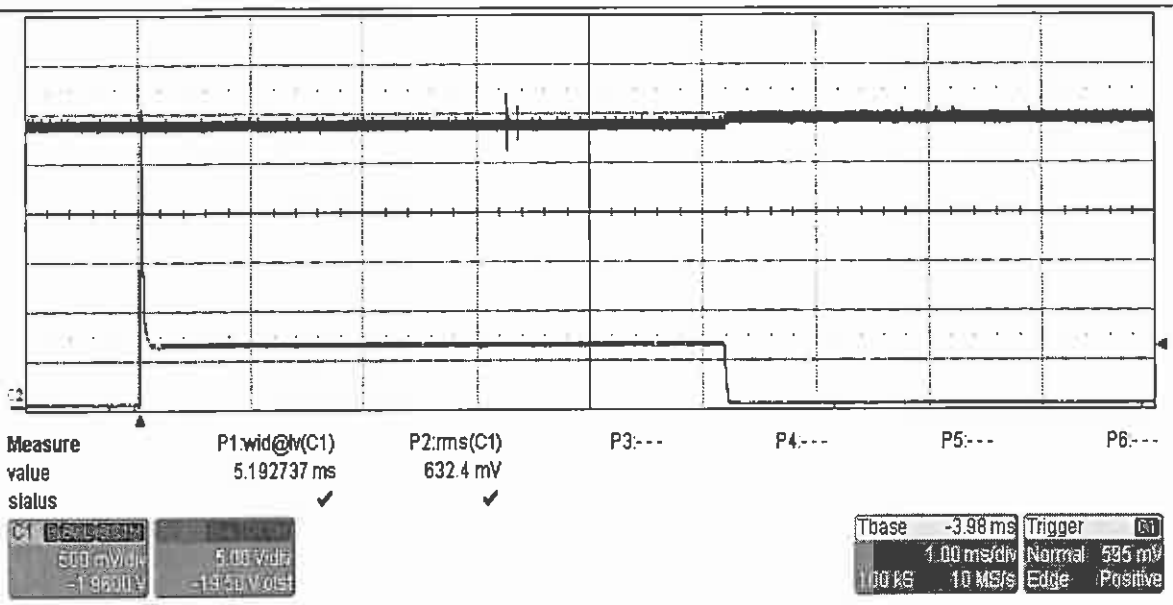
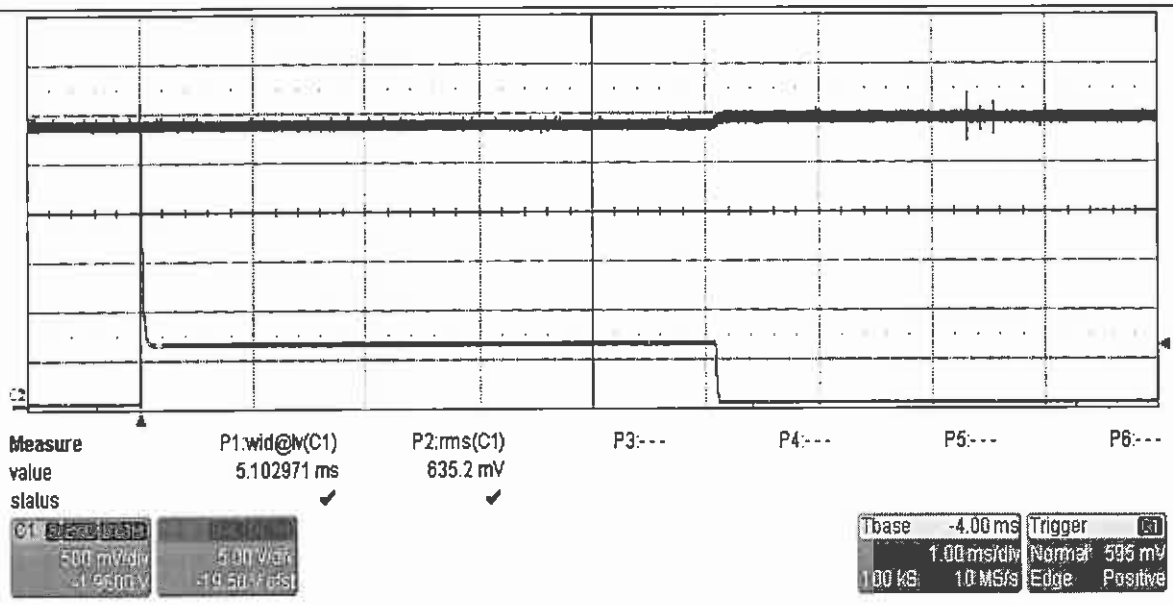


C1= I 5A/div

C2 = 28V

Annex_ 63



C1= I 5A/div

C2 = 28V

Annex_ 64

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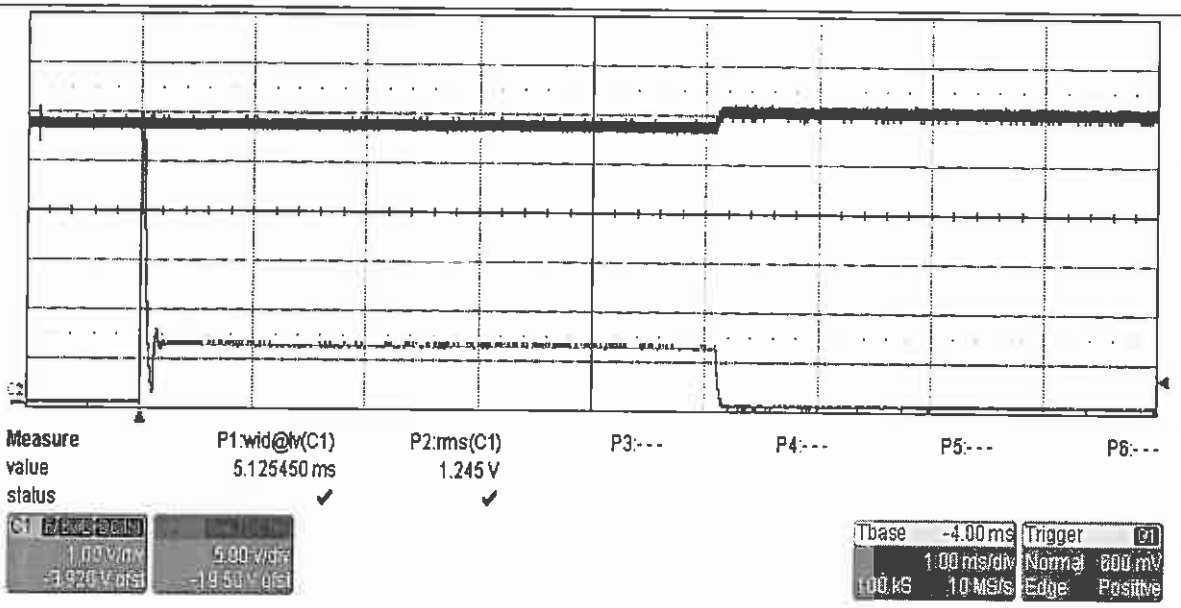
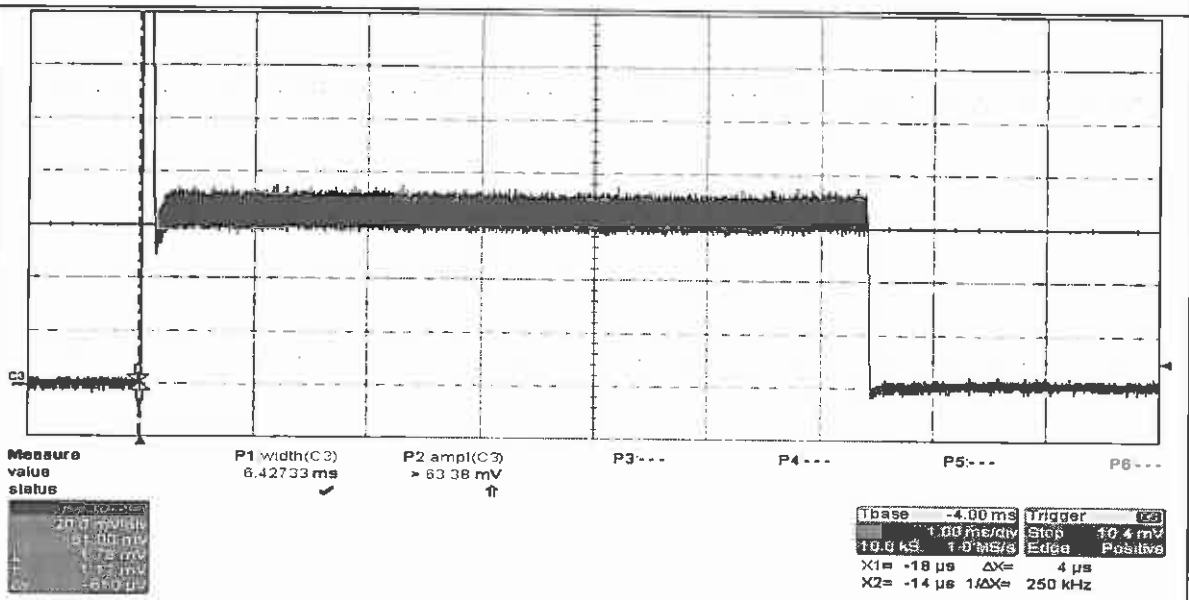


C1= I 10A/div

C2 = 28V

Annex_ 65



C1= I 5A/div

C2 = 120V

Annex_ 66

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11.CONCLUSION

The unit

AMS02-PDS
Model: PFM
Part number: 10-AMS02PDS-000.00
Serial number: FM01

tested according to the the functional test procedure PDS-PR-CGS-006_Is2, is compliant with the requirement of the specification AMS-RQ-CGS-002 Is1.

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