

Tower Power Supply Assembly CPT/LPT Test Procedure

COVER SHEET

Program: GLAST

Procedure Number: LAT-TD-01652

Procedure Title: TPS Performance Test Procedure

Controlling Document Number: _____

Controlling Document Step Number: _____

Unit S/N: 3

Descriptive Comment: pre-burn-in functional

2:30 PM

TEST READINESS REVIEW COMPLETED AND APPROVED BY THE FOLLOWING:

Test Director: [Signature] Date: 12/21/04
Quality Assurance: [Signature] Date: 12.21.04
Test Conductor: [Signature] Date: 12/21/04




REVIEWED AND APPROVED BY THE FOLLOWING:

Test Director: [Signature] Date: 12/21/04
Quality Assurance: [Signature] Date: 12.21.04
Test Conductor: [Signature] Date: 12/21/04



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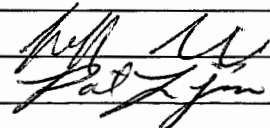

Tower Power Supply (TPS) Performance Test Procedure

Para./ Step	Test Equipment Description, Manufacturer	Model/LAT Number	*Cal./Val. Date	
TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Title: 5.1.3 Test Equipment		Operator: JL	QA: 	
5.1.3.1 - 1 Record Model/LAT number, Serial/Revision number, Calibration due dates and Validation date for all equipment used in this procedure:				
	Oscilloscope, Tektronix	220 GLAT1034	6.22.05	
	Digital Voltmeter, Fluke	87-III GLAT1667	11.3.05	
	Power Supply (min. 26.0V to 40.0V capability), BK Precision	1697 GLAT0997	6.21.05	
	True RMS Volt Meter, Agilent (HP)	3400A GLAT1229	7.29.05	
	TPS Test Board, SLAC	LAT-DS-02938 GLAT0618	12.13.05	
	VME crate, Dawn VME Products	VMESC5 GLAT0303	↑ ↓	
	VME, TST-STP Trans card, SLAC	LAT-DS-00999 GLAT0219		
	VME SBC MVME2304 card, Motorola	MVME2304-0123 GLAT0324		
	VME SBC VMESC5 card, Dawn VME Products	VMESC5 GLAT1106		
	VME LCB Mezzanine card, SLAC	LAT-TD-00860 GLAT0801		
	PC (local PC, provided by I&T), Dell	PC 68023		
	LCB Transition board cable, SLAC	LAT-DS-03247 GLAT1321		
	28 Volt supply cable, SLAC	LAT-DS-03246 GLAT1650		
	VME to test board cable (3 required), SLAC	LAT-DS-03245 N/A		
	Filter assembly, SLAC	LAT-DS-04767 GLAT1501		
	78 Pin jumper cable, SLAC	LAT-DS-03244 N/A		
	CAT5 Ethernet cable	TRD855PL-50 N/A		
	RS-232 Cable	TDC003-7 (RECO98M connectors) N/A		
	CAT6 Crossover cable	TB-4F7036 N/A		12.13.05


* This column is used to enter the date that equipment is validated, when validated equipment is recorded in this data sheet.

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TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT
Title: 5.1.4 Participant List		Operator: JL	QA: 
Para./ Step	Title	Print Name	Signature
5.1.4 - 1	Record names of all personnel that take part in the test/operation:		
	ENG	Jeffrey Ludvik	
	QE	PAT LUJAN	

Tower Power Supply Assembly CPT/LPT Test Procedure

TEST DATA SHEET		Unit S/N: 3	Date: 12/21/04	
Title: 5.2.1 Pre Operation Verifications		Operator: SL	QA: 	
Para./ Step	Description	Limits	Unit	Data
5.2	Pre-Operation Verifications			
-1	Notify QAE.	OK	OK/NG	OK
-2	Test Readiness Review is done.	OK	OK/NG	OK
-3	Record the EUT equipment:			
	TEM Part number	NA	NA	NA
	TEM LAT Bay location	NA	NA	NA
	TEM Serial number	NA	NA	NA
	TPS Part number	NA	NA	
	TPS LAT Bay location	NA	NA	NA
	TPS Serial number	NA	NA	3
-4	Power off the LAT or EGSE.	OFF	ON/OFF	OFF
-5	Set DMM to autoranging for resistance.	OK	OK/NG	OK
-6	Measure DMM lead resistance.	<2.0	Ω	0.3
-7	Measure EUT to ground.	<2.0	Ω	0.6
-8	Measure equipment to ground.	<2.0	Ω	0.8
-9	All connector savers are installed on the flight connections.	OK	OK/NG	OK
-10	The test equipment and participant lists have been completed.	OK	OK/NG	OK

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TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Paragraph: 5.4 Subassembly Level Testing		Operator: JL	QA: 	
Step	Description	Requirement	Units	Data
Switching Test:				
5.4.1-3	Verify that the information on the scope matches the sample, the signal after the filter (TPS EUT) at the top of Q12 (+) and the TPS ground (-)	<400m peak to peak	Volts	121
		8 to 10μ	Seconds	8.04

Tower Power Supply Assembly CPT/LPT Test Procedure

TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Paragraph: 5.5.1 LPT Testing		Operator: JC	QA: LAT 10 QA	
Step	Description	Requirement	Units	Data
Functional Tests, LEDs Illuminated Verifications:				
5.5.1-16	Verify that LED D2 is illuminated.	OK	OK/NG	OK
	Verify that LED D3 is illuminated.	OK	OK/NG	OK
5.5.1-17	Record the external power supply current.	0.01 - 0.06	Amperage	0.046
5.5.1-19	Verify that LED D4 is illuminated.	OK	OK/NG	OK
	Verify that LED D10 is illuminated.	OK	OK/NG	OK
	Verify that LED D11 is illuminated.	OK	OK/NG	OK
5.5.1-20	Record the external power supply current.	0.08 - 0.13	Amperage	0.104
5.5.1-22	Verify that LED D5 is illuminated.	OK	OK/NG	OK
	Verify that LED D6 is illuminated.	OK	OK/NG	OK
5.5.1-23	Record the external power supply current.	0.16 - 0.21	Amperage	0.177
5.5.1-25	Verify that LED D7 is illuminated.	OK	OK/NG	OK
	Verify that LED D8 is illuminated.	OK	OK/NG	OK
	Verify that LED D9 is illuminated.	OK	OK/NG	OK
5.5.1-26	Record the external power supply current.	0.225 - 0.325	Amperage	0.271


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TEST DATA SHEET		Unit S/N: <u>3</u>	Date/Temperature: <u>12/21/04 RT</u>	
Paragraph: 5.5.1 LPT Testing (continued)		Operator: <u>JL</u>	QA:	
Step	Description	Requirement	Units	Data
Initial Functional Test Point Measurements:				
5.5.1-27	Measure and record DC voltage for the 28V Current Monitor at TP2 (+) and TP1 (-)	(-) 0.2 – 0.0	Volts	-0.128
5.5.1-28	Measure and record TEM high voltage for the TEM Current High, at TP4 (+) and TP1 (-)	1.9 – 2.2	Volts	2.059
	Measure and record TEM low voltage for the TEM Current Low, at TP5 (+) and TP1 (-)	1.9 – 2.2	Volts	2.068
5.5.1-29	Measure and record TKR bias voltage for the TKR Bias Current Monitor, at TP6 (+) and TP1 (-)	0.0 – 0.25	Volts	0.237
	Measure and record TKR bias monitor, at TP10 (+) and TP1 (-)	0.0 – 0.1	Volts	0.014
5.5.1-30	Measure and record CAL bias for the CAL Bias Current Monitor, at TP7 (+) and TP1 (-)	0.0 – 0.4	Volts	0.244
	Measure and record CAL bias monitor, at TP8 (+) and TP1 (-)	0.0 – 0.4	Volts	0.001
5.5.1-32	Measure and record TKR bias voltage for the TKR Bias Current Monitor, at TP6 (+) and TP1 (-)	1.3 – 1.5	Volts	1.378
	Measure and record TKR bias monitor, at TP10 (+) and TP1 (-)	1.3 – 1.5	Volts	1.366
5.5.1-33	Measure and record CAL bias for the CAL Bias Current Monitor, at TP7 (+) and TP1 (-)	0.8 – 1.1	Volts	1.080
	Measure and record CAL bias monitor, at TP8 (+) and TP1 (-)	0.8 – 1.1	Volts	0.887
	Record the external power supply current.	0.225- 0.325	Amps	0.276


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TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Paragraph: 5.5.1 LPT Testing (continued)		Operator: JL	QA: 	
Step	Description	Requirement	Units	Data
Baseline Measurements:				
5.5.1-34	Measure and record CAL Bias voltage, at TP9 (+) and TP1 (-)	80 - 100	Volts	92.2
	Measure and record TKR Bias voltage, at TP11 (+) and TP1 (-)	125 - 155	Volts	141.3
5.5.1-35	Measure and record CAL 3.3 analog voltage, at TP12 (+) and TP1 (-)	3.2 - 3.465	Volts	3.380
	Measure and record CAL 3.3 digital voltage, at TP13 (+) and TP1 (-)	3.2 - 3.465	Volts	3.397
	Measure and record TKR 2.65 digital voltage, at TP14 (+) and TP1 (-)	2.50 - 2.80	Volts	2.724
	Measure and record TKR 2.65 analog voltage, at TP15 (+) and TP1 (-)	2.50 - 2.80	Volts	2.729
	Measure and record TKR 1.5 analog voltage, at TP16 (+) and TP1 (-)	1.55-1.75	Volts	1.637
	Measure and record TEM 2.5 voltage, at TP17 (+) and TP1 (-)	2.4 - 2.625	Volts	2.499
	Measure and record TEM 3.3 voltage, at TP18 (+) and TP1 (-)	3.2 - 3.465	Volts	3.400
5.5.1-36	Measure and record TEM V1 voltage, at TP19 (+) and TP1 (-)	3.1 - 3.36	Volts	3.238
	Measure and record TEM V2 voltage, at TP20 (+) and TP1 (-)	3.1 - 3.36	Volts	3.236
5.5.1-37	Measure and record TEM T1 temperature, at TP26 (+) and TP1 (-)	1.5 - 1.7	Volts	1.629
	Measure and record TEM T2 temperature, at TP27 (+) and TP1 (-)	1.5 - 1.7	Volts	1.667
	Measure and record TEM PS T1 temperature, at TP28 (+) and TP1 (-)	1.3 - 1.9	Volts	1.631
	Measure and record TEM PS T2 temperature, at TP29 (+) and TP1 (-)	1.3 - 1.9	Volts	1.623


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TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Paragraph: 5.5.1 LPT Testing (continued)		Operator: SL	QA: 	
Step	Description	Requirement	Units	Data
Ripple Voltage:				
5.5.1-39	Measure and record AC ripple voltage, at TP3 (+) and TP1 (-) on scope	< 60m peak to peak	Volts	41
	Measure and record the time, at TP3 (+) and TP1 (-) on scope	8 - 11 μ	Seconds	9.8
Load Regulation, at 100% load:				
5.5.1-40	Measure and record the 9 supply voltages and current at the external power supply	NA	NA	NA
	Measure and record CAL Bias voltage, at TP9 (+) and TP1 (-)	70 - 100	Volts	88.9
	Calculate the delta between measurements (TP9 step 32 - TP9 step 38)	0.0 - 10.0	Volts	3.13.3
	Measure and record TKR Bias voltage, at TP11 (+) and TP1 (-)	105 - 145	Volts	127.5
	Calculate the delta between measurements (TP11 step 32 - TP11 step 38)	0.0 - 20.0	Volts	13.8
	Measure and record CAL 3.3 analog voltage, at TP12 (+) and TP1 (-)	3.2 - 3.4	Volts	3.356
	Calculate the delta between measurements (TP12 step 33 - TP12 step 38)	0.0 - 0.2	Volts	.024
	Measure and record CAL 3.3 digital voltage, at TP13 (+) and TP1 (-)	3.2 - 3.4	Volts	3.353
	Calculate the delta between measurements (TP13 step 33 - TP13 step 38)	0.0 - 0.2	Volts	.044
	Measure and record TKR 2.65 digital voltage, at TP14 (+) and TP1 (-)	2.35 - 2.73	Volts	2.643
	Calculate the delta between measurements (TP14 step 33 - TP14 step 38)	0.0 - 0.2	Volts	.081
	Measure and record TKR 2.65 analog voltage, at TP15 (+) and TP1 (-)	2.35 - 2.73	Volts	2.707
	Calculate the delta between measurements (TP15 step 33 - TP15 step 38)	0.0 - 0.2	Volts	.022
	Measure and record TKR 1.5 analog voltage, at TP16 (+) and TP1 (-)	1.45 - 1.65	Volts	1.564
	Calculate the delta between measurements (TP16 step 33 - TP16 step 38)	0.0 - 0.2	Volts	.073
	Measure and record TEM 2.5 voltage, at TP17 (+) and TP1 (-)	2.4 - 2.6	Volts	2.471
	Calculate the delta between measurements (TP17 step 33 - TP17 step 38)	0.0 - 0.2	Volts	.028
Measure and record TEM 3.3 voltage, at TP18 (+) and TP1 (-)	3.2 - 3.4	Volts	3.364	
Calculate the delta between measurements (TP18 step 33 - TP18 step 38)	0.0 - 0.2	Volts	.036	
	Record the external power supply current.	0.9 - 1.1	Amps	1.044


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TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Paragraph: 5.5.1 LPT Testing (continued)		Operator: JL	QA: 	
Step	Description	Requirement	Units	Data
Load Regulation, at 150% load:				
5.5.1-42	Measure and record the 9 supply voltages and current at the external power supply	NA	NA	NA
	Measure and record CAL Bias voltage, at TP9 (+) and TP1 (-)	65 - 105	Volts	87.4
	Calculate the delta between measurements (TP9 step 32 - TP9 step 40)	0.0 - 25.0	Volts	4.8
	Measure and record TKR Bias voltage, at TP11 (+) and TP1 (-)	80 - 160	Volts	107.3
	Calculate the delta between measurements (TP11 step 32 - TP11 step 40)	0.0 - 45.0	Volts	34.0
	Measure and record CAL 3.3 analog voltage, at TP12 (+) and TP1 (-)	3.2 - 3.4	Volts	3.329
	Calculate the delta between measurements (TP12 step 33 - TP12 step 40)	0.0 - 0.3	Volts	.051
	Measure and record CAL 3.3 digital voltage, at TP13 (+) and TP1 (-)	3.2 - 3.4	Volts	3.298
	Calculate the delta between measurements (TP13 step 33 - TP13 step 40)	0.0 - 0.3	Volts	.091
	Measure and record TKR 2.65 digital voltage, at TP14 (+) and TP1 (-)	2.3 - 2.73	Volts	2.580
	Calculate the delta between measurements (TP14 step 33 - TP14 step 40)	0.0 - 0.3	Volts	.144
	Measure and record TKR 2.65 analog voltage, at TP15 (+) and TP1 (-)	2.3 - 2.73	Volts	2.679
	Calculate the delta between measurements (TP15 step 33 - TP15 step 40)	0.0 - 0.3	Volts	.053
	Measure and record TKR 1.5 analog voltage, at TP16 (+) and TP1 (-)	1.45-1.65	Volts	1.519
	Calculate the delta between measurements (TP16 step 33 - TP16 step 40)	0.0 - 0.3	Volts	.118
	Measure and record TEM 2.5 voltage, at TP17 (+) and TP1 (-)	2.4 - 2.6	Volts	2.453
	Calculate the delta between measurements (TP17 step 33 - TP17 step 40)	0.0 - 0.3	Volts	.046
	Measure and record TEM 3.3 voltage, at TP18 (+) and TP1 (-)	3.2 - 3.4	Volts	3.344
	Calculate the delta between measurements (TP18 step 33 - TP18 step 40)	0.0 - 0.3	Volts	.056
	Record the external power supply current.	1.4 - 1.8	Amps	1.644
Efficiency Test, at 100% load:				
5.5.1-44	Record the external power supply current for efficiency test	0.82 - 1.18	Amps	1.063


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Tower Power Supply Assembly CPT/LPT Test Procedure

TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Paragraph: 5.5.2 CPT Testing		Operator: SL	QA:	
Step	Description	Requirement	Units	Data
Line Regulation Test, at 100% load:				
5.5.2-2	Measure and record the 9 supply voltages and current at the external power supply (at 26.0V input voltage)	NA	NA	NA
	Measure and record CAL Bias voltage, at TP9 (+) and TP1 (-)	70 - 100	Volts	88.9
	Calculate the delta between measurements (TP9 step 32 - TP9 step 44)	0.0 - 10.0	Volts	0.0
	Measure and record TKR Bias voltage, at TP11 (+) and TP1 (-)	105 - 145	Volts	117.4
	Calculate the delta between measurements (TP11 step 32 - TP11 step 44)	0.0 - 20.0	Volts	0
	Measure and record CAL 3.3 analog voltage, at TP12 (+) and TP1 (-)	3.2 - 3.4	Volts	3.381
	Calculate the delta between measurements (TP12 step 33 - TP12 step 44)	0.0 - 0.2	Volts	.001
	Measure and record CAL 3.3 digital voltage, at TP13 (+) and TP1 (-)	3.2 - 3.4	Volts	3.396
	Calculate the delta between measurements (TP13 step 33 - TP13 step 44)	0.0 - 0.2	Volts	.001
	Measure and record TKR 2.65 digital voltage, at TP14 (+) and TP1 (-)	2.35 - 2.73	Volts	2.722
	Calculate the delta between measurements (TP14 step 33 - TP14 step 44)	0.0 - 0.2	Volts	.001
	Measure and record TKR 2.65 analog voltage, at TP15 (+) and TP1 (-)	2.35 - 2.73	Volts	2.748
	Calculate the delta between measurements (TP15 step 33 - TP15 step 44)	0.0 - 0.2	Volts	.001
	Measure and record TKR 1.5 analog voltage, at TP16 (+) and TP1 (-)	1.3 - 1.6	Volts	1.636
	Calculate the delta between measurements (TP16 step 33 - TP16 step 44)	0.0 - 0.2	Volts	.003
	Measure and record TEM 2.5 voltage, at TP17 (+) and TP1 (-)	2.4 - 2.6	Volts	2.448
	Calculate the delta between measurements (TP17 step 33 - TP17 step 44)	0.0 - 0.2	Volts	.002
	Measure and record TEM 3.3 voltage, at TP18 (+) and TP1 (-)	3.2 - 3.4	Volts	3.399
	Calculate the delta between measurements (TP18 step 33 - TP18 step 44)	0.0 - 0.2	Volts	.001
	Record the external power supply current.	0.82 - 1.18	Amps	1.116

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Tower Power Supply Assembly CPT/LPT Test Procedure

TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Paragraph: 5.5.2 CPT Testing (continued)		Operator: SL	QA: 	
Step	Description	Requirement	Units	Data
Line Regulation Test, at 100% load: (continued)				
5.5.2-4	Measure and record the 9 supply voltages and current at the external power supply (at 30.0V input voltage)	NA	NA	NA
	Measure and record CAL Bias voltage, at TP9 (+) and TP1 (-)	70 - 100	Volts	88.9
	Calculate the delta between measurements (TP9 step 32 - TP9 step 46)	0.0 - 10.0	Volts	0
	Measure and record TKR Bias voltage, at TP11 (+) and TP1 (-)	105 - 145	Volts	127.5
	Calculate the delta between measurements (TP11 step 32 - TP11 step 46)	0.0 - 20.0	Volts	0
	Measure and record CAL 3.3 analog voltage, at TP12 (+) and TP1 (-)	3.2 - 3.4	Volts	3.357
	Calculate the delta between measurements (TP12 step 33 - TP12 step 46)	0.0 - 0.2	Volts	.001
	Measure and record CAL 3.3 digital voltage, at TP13 (+) and TP1 (-)	3.2 - 3.4	Volts	3.353
	Calculate the delta between measurements (TP13 step 33 - TP13 step 46)	0.0 - 0.2	Volts	0
	Measure and record TKR 2.65 digital voltage, at TP14 (+) and TP1 (-)	2.35 - 2.73	Volts	2.643
	Calculate the delta between measurements (TP14 step 33 - TP14 step 46)	0.0 - 0.2	Volts	0
	Measure and record TKR 2.65 analog voltage, at TP15 (+) and TP1 (-)	2.35 - 2.73	Volts	2.707
	Calculate the delta between measurements (TP15 step 33 - TP15 step 46)	0.0 - 0.2	Volts	0
	Measure and record TKR 1.5 analog voltage, at TP16 (+) and TP1 (-)	1.3 - 1.6	Volts	1.562
	Calculate the delta between measurements (TP16 step 33 - TP16 step 46)	0.0 - 0.2	Volts	.002
	Measure and record TEM 2.5 voltage, at TP17 (+) and TP1 (-)	2.4 - 2.6	Volts	2.470
	Calculate the delta between measurements (TP17 step 33 - TP17 step 46)	0.0 - 0.2	Volts	.001
	Measure and record TEM 3.3 voltage, at TP18 (+) and TP1 (-)	3.2 - 3.4	Volts	3.365
	Calculate the delta between measurements (TP18 step 33 - TP18 step 46)	0.0 - 0.2	Volts	.001
	Record the external power supply current.	0.82 - 1.18	Amps	0.998


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Tower Power Supply Assembly CPT/LPT Test Procedure

TEST DATA SHEET		Unit S/N:	Date/Temperature:		
Paragraph: 5.5.2 CPT Testing (continued)		3	12/21/04 RT		
		Operator:	QA:		
		JL	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> LAT TO QA </div>		
Step	Description	Requirement	Units	Data	
Line Regulation Test, at 100% load: (continued)					
5.5.2-6	Measure and record the 9 supply voltages and current at the external power supply (at 40.0V input voltage)	NA	NA	NA	
	Measure and record CAL Bias voltage, at TP9 (+) and TP1 (-)	70 - 100	Volts	88.9	
	Calculate the delta between measurements (TP9 step 32 - TP9 step 48)	0.0 - 10.0	Volts	0	
	Measure and record TKR Bias voltage, at TP11 (+) and TP1 (-)	105 - 145	Volts	127.5	
	Calculate the delta between measurements (TP11 step 32 - TP11 step 48)	0.0 - 20.0	Volts	0	
	Measure and record CAL 3.3 analog voltage, at TP12 (+) and TP1 (-)	3.2 - 3.4	Volts	3.354	
	Calculate the delta between measurements (TP12 step 33 - TP12 step 48)	0.0 - 0.2	Volts	.002	
	Measure and record CAL 3.3 digital voltage, at TP13 (+) and TP1 (-)	3.2 - 3.4	Volts	3.352	
	Calculate the delta between measurements (TP13 step 33 - TP13 step 48)	0.0 - 0.2	Volts	.001	
	Measure and record TKR 2.65 digital voltage, at TP14 (+) and TP1 (-)	2.35 - 2.73	Volts	2.641	
	Calculate the delta between measurements (TP14 step 33 - TP14 step 48)	0.0 - 0.2	Volts	.002	
	Measure and record TKR 2.65 analog voltage, at TP15 (+) and TP1 (-)	2.35 - 2.73	Volts	2.705	
	Calculate the delta between measurements (TP15 step 33 - TP15 step 48)	0.0 - 0.2	Volts	.002	
	Measure and record TKR 1.5 analog voltage, at TP16 (+) and TP1 (-)	1.3 - 1.6	Volts	1.561	
	Calculate the delta between measurements (TP16 step 33 - TP16 step 48)	0.0 - 0.2	Volts	.003	
	Measure and record TEM 2.5 voltage, at TP17 (+) and TP1 (-)	2.4 - 2.6	Volts	2.469	
	Calculate the delta between measurements (TP17 step 33 - TP17 step 48)	0.0 - 0.2	Volts	.002	
	Measure and record TEM 3.3 voltage, at TP18 (+) and TP1 (-)	3.2 - 3.4	Volts	3.365	
	Calculate the delta between measurements (TP18 step 33 - TP18 step 48)	0.0 - 0.2	Volts	.001	
	Record the external power supply current.	0.65 - 0.95	Amps	0.803	


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TEST DATA SHEET		Unit S/N: <u>3</u>	Date/Temperature: <u>12/21/04 RT</u>	
Paragraph: 5.5.2 CPT Testing (continued)		Operator: <u>SL</u>	QA:	
Step	Description	Requirement	Units	Data
Margin Test, at 100% load:				
Note: Do not run the margin tests for Flight unit testing.				
5.5.2-10	Measure and record CAL 3.3 analog voltage, at TP12 (+) and TP1 (-)	2.7 - 3.0	Volts	<div style="font-size: 2em; font-weight: bold;">skip</div> <div style="border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin: 0 auto;"></div>
	Measure and record CAL 3.3 digital voltage, at TP13 (+) and TP1 (-)	2.7 - 3.0	Volts	
	Measure and record TKR 2.65 digital voltage, at TP14 (+) and TP1 (-)	1.9 - 2.3	Volts	
	Measure and record TKR 2.65 analog voltage, at TP15 (+) and TP1 (-)	1.9 - 2.3	Volts	
	Measure and record TKR 1.5 analog voltage, at TP16 (+) and TP1 (-)	1.0 - 1.35	Volts	
	Measure and record TEM 2.5 voltage, at TP17 (+) and TP1 (-)	1.9 - 2.3	Volts	
	Measure and record TEM 3.3 voltage, at TP18 (+) and TP1 (-)	2.7 - 3.0	Volts	
5.5.2-12	Measure and record CAL 3.3 analog voltage, at TP12 (+) and TP1 (-)	3.6 - 4.0	Volts	<div style="border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin: 0 auto;"></div>
	Measure and record CAL 3.3 digital voltage, at TP13 (+) and TP1 (-)	3.6 - 4.0	Volts	
	Measure and record TKR 2.65 digital voltage, at TP14 (+) and TP1 (-)	2.85 - 3.1	Volts	
	Measure and record TKR 2.65 analog voltage, at TP15 (+) and TP1 (-)	2.85 - 3.1	Volts	
	Measure and record TKR 1.5 analog voltage, at TP16 (+) and TP1 (-)	1.6 - 1.8	Volts	
	Measure and record TEM 2.5 voltage, at TP17 (+) and TP1 (-)	2.7 - 2.9	Volts	
	Measure and record TEM 3.3 voltage, at TP18 (+) and TP1 (-)	3.6 - 4.0	Volts	
				<div style="font-size: 2em;">J</div>


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Tower Power Supply Assembly CPT/LPT Test Procedure

TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Paragraph: 5.5.2 CPT Testing (continued)		Operator: JL	QA: 	
Step	Description	Requirement	Units	Data
Load Response Transient Test, oscillator on:				
NOTE: For the Digital and analog tests, use the EM sample for the EM unit and the Flight sample for the Flight unit.				
5.5.2-17	Verify that the information on the scope matches the Bias sample, CAL Bias, scope connection CH1 at TP9 (+) and TP1 (-)	<10 peak to peak	Volts	4.4
5.5.2-18	Verify that the information on the scope matches the Bias sample, TKR Bias, scope connection CH1 at TP11 (+) and TP1 (-)	<25 peak to peak	Volts	16.3
5.5.2-19	Verify that the information on the scope matches the analog sample, CAL 3.3 analog voltage, scope connection CH1 at TP12 (+) and TP1 (-)	<400m peak to peak	Volts	268
	Verify the signal settles for the required period	2.50-8.00	ms	OK
5.5.2-20	Verify that the information on the scope matches the digital sample, CAL 3.3 digital voltage, scope connection CH1 at TP13 (+) and TP1 (-)	<700m peak to peak	Volts	448
	Verify the signal settles for the required period	2.50-8.00	ms	OK
5.5.2-21	Verify that the information on the scope matches the digital sample, TKR 2.65 digital voltage, scope connection CH1 at TP14 (+) and TP1 (-)	<1.75 peak to peak	Volts	1.38
	Verify the signal settles for the required period	2.50-8.00	ms	OK
5.5.2-22	Verify that the information on the scope matches the analog sample, TKR 2.65 analog voltage, scope connection CH1 at TP15 (+) and TP1 (-)	<700m peak to peak	Volts	472
	Verify the signal settles for the required period	2.50-8.00	ms	OK
5.5.2-23	Verify that the information on the scope matches the analog sample, TKR 1.5 analog voltage, scope connection CH1 at TP16 (+) and TP1 (-)	<1.5 peak to peak	Volts	1.24
	Verify the signal settles for the required period	2.50-8.00	ms	OK
5.5.2-24	Verify that the information on the scope matches the digital sample, TEM 2.5 voltage, at scope connection CH1 TP17 (+) and TP1 (-)	<100m peak to peak	Volts	30
	Verify the signal settles for the required period	<1	ms	OK
5.5.2-25	Verify that the information on the scope matches the digital sample, TEM 3.3 voltage, scope connection CH1 at TP18 (+) and TP1 (-)	<150m peak to peak	Volts	49
	Verify the signal settles for the required period	<1	ms	OK

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Tower Power Supply Assembly CPT/LPT Test Procedure

TEST DATA SHEET		Unit S/N: 3	Date/Temperature: 12/21/04 RT	
Paragraph: 5.5.2 CPT Testing (continued)		Operator: JL	QA: 	
Step	Description	Requirement	Units	Data
TPS Noise Test, at 100% load:				
5.5.2-28	Measure and record CAL Bias voltage, at TP9 (+) and TP1 (-)	<500μ	Volts	100 μV
	Measure and record TKR Bias voltage, at TP11 (+) and TP1 (-)	<500μ	Volts	350
	Measure and record CAL 3.3 analog voltage, at TP12 (+) and TP1 (-)	<150μ	Volts	<100
	Measure and record CAL 3.3 digital voltage, at TP13 (+) and TP1 (-)	<200μ	Volts	<100
	Measure and record TKR 2.65 digital voltage, at TP14 (+) and TP1 (-)	<150μ	Volts	<100
	Measure and record TKR 2.65 analog voltage, at TP15 (+) and TP1 (-)	<150μ	Volts	<100
	Measure and record TKR 1.5 analog voltage, at TP16 (+) and TP1 (-)	<150μ	Volts	<100
	Measure and record TEM 2.5 voltage, at TP17 (+) and TP1 (-)	<500μ	Volts	160
	Measure and record TEM 3.3 voltage, at TP18 (+) and TP1 (-)	<500μ	Volts	240

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