

JET PROPULSION LABORATORY

INTEROFFICE MEMORANDUM

TES DFM #979-4.1.1

10/13/00

TO : Design File
FROM : Ed Miller
SUBJECT: VME Backplane HRCR Completion
REF: TES Design File Memo #937-4.2.1

The HRCR for the TES VME Backplane Assembly, ref. des. 2045BP01, was completed on 07/13/2000.

All action items generated at that review have now been closed.

A copy of the completed and signed HRCR form is attached, and is included with the End Item Data Package (EIDP). A hard copy of the EIDP may be found in the TES project files, in the I&T files, and in the JPL Vellum Files.

Electronic copies of all TES EIDP's are being made by optically scanning the packages. These electronic copies will be stored on compact disks which will be available from the TES project office upon completion of the scanning.

cc: TES Design File

TES Hardware Requirements Certification Review

Assembly/Subsystem			Cognizant Engineer			Phone			Section			Date		
TES VME BACKPLANE			JACK WOODDELL			393-3914			344			07/13/2000		
Ref. Des.	Drawing No.	Dwg. Rev.	Serial No.	Nomenclature			Final IR	Op. Time or Cycles (if avail.)			Mass (Kg)			
2045BP 01	10179403	F	FLT01	TES_BACKPLANE PCB ASSEMBLY			900848	N/A			(w/o conformal coat) 1.2432 kg			
Check applicable answer and give necessary explanation in remarks column			Y e s	N o	N / A	Remarks			Data Attachments			Signature Approval & Date		
1. Are all drawings and specifications complete, approved, released and frozen?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				18. Latest Top Assembly Drawings <input checked="" type="checkbox"/> Attached <input type="checkbox"/> None			Cognizant Engineer <i>Jack Wooddell</i>		
2. Do the released drawings and specifications reflect all approved changes?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				19. List of open ECRs <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			Cognizant PEM <i>Ed Shalom</i>		
3. Is hardware identical to other hardware delivered? If no, provide difference list.			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				20. Waivers <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			Materials Engineer <i>Steve Touhey</i>		
4. Does the hardware meet the requirement of its FRs, specifications, waivers and/or ICDs? If no, provide difference list. (See Item 28 for reference.)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				21. Open MRBs <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			QA Engineer <i>John Kennedy</i>		
5. Have all discrepancies and MRBs been dispositioned and agreed to by Engineering/ QA?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				22. Open Problem Logs & P/FRs <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			Mission Assurance Mgr. <i>W. J. [unclear]</i>		
6. Has complete as-built list information been submitted to PDMG?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				23. Open Problem Logs & P/FRs on sim. H/W and/or related S/W <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			System Engineer <i>W. Steinhilber 7/13/00</i>		
7. Are required design analyses complete, up to date, approved and archived? Attach identifying list per item 29.			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				24. Signed Environmental Test Authorization & Summary (ETAS) <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			Integration & Test Mgr. <i>W. [unclear]</i>		
8. Have all required environmental qualification tests & analyses called for in D-13144, Table 5.2 been completed?			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				25. Assy/ Subsystem Power Data Sheet <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			Instrument Manager <i>W. [unclear]</i>		
9. Is all required assembly and/or subsystem level functional testing completed?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				26. Shortage List <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			Other		
10. Have applicable telemetry calibration data been submitted to the System Engineer?			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				27. Operational Constraints/Idiosyncrasies <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			Other		
11. Have all required single point failure actions been taken?			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				28. Requirements Verification Matrix (reference item 4) <input checked="" type="checkbox"/> Attached <input type="checkbox"/> None			Other		
12. Have all required mass data been submitted?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				29. Design analyses completed, approved & archived (per item 7) <input type="checkbox"/> Attached <input checked="" type="checkbox"/> None			Other		
13. Have all stress, corrosion & flammable material requirements been met?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preliminary approval from materials engineering obtained. Final approval will occur before conformal coating and bake out.						Other		
14. Have all piece parts, processes and materials been approved by JPL?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							Other		
15. Has hardware been baked out, cleaned and met all contamination control requirements?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Bake out and cleaning will be performed after testing in the IEM.						Other		
16. Are all required shipping containers, shipping procedures, special handling procedures, AHSE and SE ready?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The backplane will be installed in IEM						Other		
17. Is this hardware acceptable for flight?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Conformal coating and bake out have not been done. Except for this, the hardware is acceptable for flight. It is acceptable for integration into IEM.						Other		