

ACIS Verification Summary Report

Specification:	ACIS Contract End Item Specification
Requirement Number/Title:	3.3.3.1.2.1 Connectors (VRSD 3.3.3.1.2.1-2)
Requirement Statement: Electrical contact retention shall comply with MSFC-STD-781.	
Verification Method:	Inspection and Validation of Records
Procedure Number:	
Configuration:	
Cycle Time:	
Verification Discussion/Results:	
<p>Acceptance test of electrical connectors includes 100% push/pull testing of pins and sockets for contact retention. The test force is >4.0 pounds. All pins and sockets comply with MSFC-STD-781. QA Inspectors either perform or witness contact retention testing. The results of contact retention tests on each contact is recorded in the assembly traveler. After fabrication and test is completed, the AWO is reviewed for completeness.</p>	

Brian Klatt
 ACIS Cognizant Engineer

5/13/97
 Date

Element:
ACIS

Requirement Number:
3.3.3.1.2.1-2

Verification Item:
3.3.3.1.2.1-2

Requirement Title:
Connectors

**AXAF-I
Verification
Requirement
Compliance Data
Submittal**

Evaluators:
EDI

Type of Review:
 Verification Item Closure
 Requirement Closure

Compliance Data/Location:
MA-74/36.01510.137/Bldg 4200 Rm 522 (MIT Closure Report)
MA-304/ACIS-600-I-05/Rm 522 Bldg 4200
MA-306/ACIS-600-I-09/Rm 522 Bldg 4200

Verification Method:
Inspection OR Validation of Records

Comments:
MIT HAS STATED WHAT IS REQUIRED FOR VERIFICATION BUT HAS NOT STATED THAT THIS HAS BEEN INDEED BEEN DONE.

Note, by accident, the connector picked by the reviewer for spot check is a solder connector (M835143/01) with the pins molded in the shell -> no push/pull test.
We have included the push/pull test data from one of the other cables (10 identical units) that goes from the DEA to the backplate of the DA.

William Mayer 7/25/97

Status
Open 5/30/97 due 6/27/97

Recommendation: Approve
 Disapprove
 Other (Explain)

Action Required for Closure:
PROVIDE DOCUMENTATION.

MSFC Evaluator: JEFF WESLEY
Date: 6/22/97
Organization: EB14
Phone Number: 4-3393

Disposition: Approve
 Disapprove
 Other (Explain)

Action Required for Closure:
Change tense of certification letter to say that all the necessary things have been done and are complete. Also, as a spot check, provide the push/pull test results for the LMA connector on the RCTU side that contains the serial digital A PSMC data and the sensitive connector on the DA in terms of mating susceptibility to damage.

Chief Engineer: Anthony R. Lavoie
Date: 6/26/97

36-01510.137

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Acceptance testing of electrical connectors included 100% push/pull testing of pins and sockets for contact retention. The test force was >4.0 pounds. All pins and sockets comply with MSFC-STD-781. QA Inspectors either performed or witnessed contact retention testing. The results of contact retention tests was recorded in the assembly traveler. After fabrication and test was completed, the traveler was reviewed and confirmed compliance with MSFC-STD-781 requirements.

Samples of selected push/pull test documentation have been requested by MSFC. The requested LMA sample is included with this Verification Summary Report. See steps 190 and 210 of the LMA traveler for J7 and J8 push/pull testing. The MIT sample requested by MSFC is a solder cup connector with non-removable contacts. A similar connector traveler has been provided with this Verification Summary Report.

Brian Klatt
ACIS Cognizant Engineer

7/23/97
Date





MANUFACTURING PROCESS PLAN

Planner: Ky Gardner
 Part Number: 89AC427000-009
 Name: Motherboard Assy

EFF. FU 1 & UP

Q.E.: Don Perko
 Serial Number: 001
 Revision: New
 Program: ACIS

0119P
 8 7 8

160 TSB	Assemble J6 connector using ST81D250-20P1 pins per Eng Dwg Shts 1 and 2, Assemble per MP85296, Ref Eng Dwg Flag Note 15. Quality verify correct component installation per MP85296, PQVR-1a, Ref Eng Flag Note 15.	MFG 60603 10/21/96 KG	QC  061 8 78
170 TSB	Perform contact retention test on J6 per MP85296.	MFG. 60603	
180 TSB	Assemble J7 connector using ST81D250-20P1 pins per Eng Dwg Shts 1 and 2, Assemble per MP85296, Ref Eng Dwg Flag Note 15. Quality verify correct component installation per MP85296, PQVR-1a, Ref Eng Flag Note 15.	MFG 60603 10/21/96 KG	QC  061 8 78
190 TSB	Perform contact retention test on J7 per MP85296.	MFG 60603	
200 TSB	Assemble J8 connector using ST81D250-20P1 pins per Eng Dwg Shts 1 and 2, Assemble per MP85296, Ref Eng Dwg Flag Note 15. Quality verify correct component installation per MP85296, PQVR-1a, Ref Eng Flag Note 15.	MFG 60603 10/21/96 KG	QC  061 8 78
210 TSB	Perform contact retention test on J8 per MP85296.	MFG. 60603	
220 TSB	Assemble J9 connector using ST81D250-20P1 pins per Eng Dwg Shts 1 and 2, Assemble per MP85296, Ref Eng Dwg Flag Note 15. Quality verify correct component installation per MP85296, PQVR-1a, Ref Eng Flag Note 15.	MFG. 60603 10/21/96 KG	QC  061 8 78

ASSY.# 36-30404	REV.	ASSY.NAME: W6 HEATER CONTROL	S/N 002F
SCHEMATIC# 36-03020.01		SHEET 7 OF 7	REV. <i>EF</i>
"FROM" CONN W6P2		"FROM CONN.# M83513/01-CN	
"TO" CONN. W6P1 AND W6P4		"TO" CONN.# KA41/127BEV33FRTAH	

WIRETYPE#1 (W.T.#1)	NICKEL	36-03214	AWG26 (19/38)
WIRETYPE#2 (W.T.#2)			AWG
WIRETYPE#3 (W.T.#3)			AWG
WIRETYPE#4 (W.T.#4)			AWG

FROM	CONNECTED	TO	SIGNAL DESIG.	NOTES
W6P2 -1		W6		
-2				
-3				
-4				
-5				
-6				
W6P2 -7				
-8				
-9				
-10			P1 -2	COMMON
-11		P1 -1	DS1IN	
-12				
-13				
-14				
-15				
-16				
-17				
-18				
-19				
-20				
-21		P4 -2	COMMON	ECO36-873

How to Order - MIL-C-83513 Part Number Nomenclature Δ

M83513 / 01 - A ** C

SERIES _____
 Connector, Electrical, Rectangular
 Microminiature, Polarized Shell

MIL-C-83513 SLASH SHEET

- 01 - Plug, Connector, Solderpot
 - 02 - Receptacle, Connector, Solderpot
 - 03 - Plug, Connector, Crimp Type
 - 04 - Receptacle, Connector, Crimp Type
 - 05 - Hardware only Δ
 - 06 - Plug, Connector, Solderpot
 - 07 - Receptacle, Connector, Solderpot
 - 08 - Plug, Connector, Crimp Type
 - 09 - Receptacle, Connector, Crimp Type
- } Metal Shell
- } Plastic Δ

INSERT ARRANGEMENT

	METAL SHELL	PLASTIC
A -	9 Contact	9 Contact
B -	15 Contact	15 Contact
C -	21 Contact	21 Contact
D -	25 Contact	25 Contact
E -	31 Contact	31 Contact
F -	37 Contact	37 Contact
G -	51 Contact	51 Contact
H -	100 Contact	Δ

WIRE TYPE

- No Number - For Solderpot
- 01 - 18" long, #26 AWG per MIL-W-22759/11-26-9
 - 02 - 36" long, #26 AWG per MIL-W-22759/11-26-9
 - 03 - 18" long, #26 AWG per MIL-W-22759/11-26
 Color Coded per MIL-STD-681, System 1 Δ
 - 04 - 36" long, #26 AWG per MIL-W-22759/11-26
 Color Coded per MIL-STD-681, System 1 Δ
 - 05 - .5" long, #25 AWG, type S per QQ-W-343,
 Gold Plated
 - 06 - 1.0" long, #25 AWG, type S per QQ-W-343,
 Gold Plated
 - 07 - .5" long, #25 AWG, type S per QQ-W-343,
 Tin Plated
 - 08 - 1.0" long, #25 AWG, type S per QQ-W-343,
 Tin Plated
 - 09 - 18" long, #26 AWG per MIL-W-22759/33-26-9 Δ
 - 10 - 36" long, #26 AWG per MIL-W-22759/33-26-9 Δ
 - 11 - 18" long, #26 AWG per MIL-W-22759/33-26
 Color Coded per MIL-STD-681, System 1 Δ Δ
 - 12 - 36" long, #26 AWG per MIL-W-22759/33-26
 Color Coded per MIL-STD-681, System 1 Δ Δ
 - 13 - 72" long, #26 AWG per MIL-W-22759/11-26-9 Δ
 - 14 - 72" long, #26 AWG per MIL-W-22759/11-26
 Color Coded per MIL-STD-681, System 1 Δ
 - 15 - 72" long, #26 AWG per MIL-W-22759/33-26-9 Δ
 - 16 - 72" long, #26 AWG per MIL-W-22759/33-26
 Color Coded per MIL-STD-681, System 1 Δ Δ

SHELL FINISH

- No letter - for Plastic type connector
- C - Cadmium
- N - Electroless Nickel Δ

NOTES:

- Δ (Specify when ordering, if necessary.)
- Δ For every Mil-Spec P/N, ITT has two corresponding part numbers.
 Example: ITT P/N's MDM01-A9 (Diallyl Phthalate Insulator)
 MDM01-A9 (Polyester Insulator)
- 2 - Tolerance on wire lengths - 18", 36" and 72" long,
 -1.000" / -0.000"
 .5" and 1.00" +.200" / -.000"
- Δ For space application, connector shell finish must be "N" and
 wire must be per MIL-W-22759/33-26.
- 4 - Any deviations to these P/N's will result in assignment of a special
 P/N, consult factory.
- Δ No size 100 in plastic type connector.
- Δ Color coding in accordance with MIL-STD-681, System 1 except the
 appropriate color code is the individual contact cavity number minus
 1 for contact positions.
- Δ For mounting hardware to Military Specification (sizes 9 to 100) see
 page 238.

Microminiature Connectors

Qualification to slash sheets 10 thru 27 for the PCB connectors will be announced when completed.

Crimp Connector Assembly Work Order

Project:

Page: of:

Assembly Name: W9 ⁵³ CCD INT. ^X SUPP. STR.CABLE	Drawing Number: 36-30407	Build To Rev. A	Assembly Serial Number: 001F
J#/P# W9P2	Connector SGMC34FOE100JO	Contact M39029/35-441	
Prepared By:	R&QA	Project	


Step No.	Type	Description	Perf By:	Date
1	A	PREPARE WIRES AND CRIMP CONTACTS PER NASA SPEC NHB 5300.4(3H)	JH	11-6-96
2	A	PREPARE WIRES FOR CRIMPING	JH	11-6-96
		-STRIP WIRES WITH MECHANICAL STRIPPER LABELED PER WIRE GAUGE. WIRE STRIPPER SET # 2	JH	11-6-96
		-CLEAN WIRES USING WIPES AND ISOPROPANOL	JH	11-6-96
		- INSPECT STRIPS	JH	11-6-96
3	A	PREPARE CONTACTS FOR CRIMPING	JH	11-6-96
		-BLOW OUT CONTACT BARREL USING COMPRESSED AIR	JH	11-6-96
		-VISUALLY INSPECT CRIMP CONTACTS INSURING NO DEBRIS IN CONTACT BARREL	JH	11-6-96
4	A	CRIMP TOOL QUALIFICATION		
		-CRIMP TOOLS USED		
		-TOOL: M22520/2-01 S/N 4 RECALIBRATION DATE 5/24/97	JH	11-6-96
		- TURRET: K280	JH	11-6-96
5	AI	TEST		
		-GO/NO-GO TEST WITH TOOL M22520/3-01	JH	11-6-96
		-VERIFY PULL TEST PERFORMED PER "TENSILE TEST DAILY LOG"	JH	11-6-96
6	AI	CRIMP PINS/SOCKETS FOR CONNECTOR P2 PER SCHEMATIC DRAWING # 36-03020.01 SHT 2	JH	11-6-96
		-CONNECTOR TYPE PER PARTS LIST 36- 30407.02	JH	11-6-96
		-CONTACT TYPE 22	JH	11-6-96
		-USE TOOL SPECIFIED IN STEP 4		
		-CRIMP TOOL SETTING WIRE TYPE #1 - 4	JH	11-6-96
		-CRIMP TOOL SETTING WIRE TYPE #2 - 4	JH	11-6-96
		-CRIMP TOOL SETTING WIRE TYPE #3 -		
		-CRIMP TOOL SETTING WIRE TYPE #4 -		
		-CRIMP INSPECTION M.I.T. Q.A.	JH	11-6-96
7	A	INSERT CONTACTS IN CONNECTOR PER ATTACHED WIRING LIST	JH	11-5-96
		-LABEL CONTACT PIN #'S ON WIRES		
8	AI	MIT QA - INSPECT - VERIFY CONTACT RETENTION	JH	11-18-96
9	A	CLEAN, BAG, AND TAG HARNESS. INSTALL DUST COVERS. - RESTRAIN WIRES WITH BACKSHELL UNTIL MOUNTING FOR FLIGHT.		
10	A	STORE IN FLIGHT ASSEMBLY AREA FOR NEXT LEVEL OF ASSEMBLY		

ASSY.# 36-30407 REV. *A* ASSY.NAME:W9 CCD INT. CABLE *53* S/N 001F

SCHEMATIC #36- 30201.01 SHEET 2 OF 6 REV. *SL*

"FROM" CONN W9P2 "FROM CONN.# SGMC34FOE100JO

W9P2 QUALIFICATION TESTS

CONN #	<i>11-18-96</i> PUSH TEST	<i>OK for EW</i> CONTINUTY	IR	<i>OK for EW</i> DISCONTINUTY	DWV
W9P2 -A			<i>N/A</i>		<i>N/A</i>
-B		✓		✓	
-C		✓		✓	
-D					
-E		✓		✓	
-F		✓		✓	
-H		✓		✓	
-J		✓		✓	
-K		✓		✓	
-L		✓		✓	
-M		✓		✓	
-N		✓		✓	
-P		✓		✓	
-R		✓		✓	
-S		✓		✓	
-T		✓		✓	
-U		✓		✓	
-V		✓		✓	
-W		✓		✓	
-X		✓		✓	
-Y		✓		✓	
-Z		✓		✓	

