

Box Header

1. SCOPE

This specification covers the performance, tests and quality requirements for Box Header connector.

2. APPLICABLE DOCUMENTS AND SPECIFICATIONS

The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

- A. Test Report: 501-57633

2.2. INDUSTRY STANDARDS

- A. EIA-364
- B. MIL-STD-202

3. REQUIREMENTS

3.1. DESIGN AND CONSTRUCTION

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

3.2. MATERIALS

- A. Housing: Thermoplastic, UL 94V-0.
- B. Contact: Brass, Gold over Nickel plated.

3.3. RATING

- A. Voltage: 125 VAC/DC
- B. Operating Temperature: -55°C to +105°C
- C. Current: 2.0 A

3.4. APPLICABLE PRINTED CIRCUIT BOARD

Hole Diameter: 1.05mm - 0.95mm

3.5. PERFORMANCE AND TEST DESCRIPTION

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in Table1. All tests are performed at ambient environmental conditions per AMP Specification 109-1 unless otherwise specified.

DWN	DATE	APVD	DATE
Angus Wu	30-May-2005	Wei-Jer Ke	30-May-2005
			FZ00-0039-05

3.6. TEST REQUIREMENTS AND PROCEDURES SUMMARY

TEST ITEMS	REQUIREMENTS	PROCEDURES
Examination of product	Meets requirements of product drawing and Specification.	Visual inspection No physical damage
ELECTRICAL		
Termination Resistance	20 mΩ max	EIA-364-23B Subject mated contacts assembled in housing to 20mV Max open circuit at 50mA Max
Insulation Resistance	1000 MΩ min	EIA-364-21C After 500 VDC for 1 minute, measure the insulation resistance between the adjacent contacts of mated and unmated connector assemblies.
Dielectric Withstanding Voltage	No creeping discharge or flashover shall occur.	EIA-364-20B Test between adjacent contacts of unmated connector. Voltage: 1000VAC for 1 minute, Current leakage: 5mA Max
MACHANICAL		
Mating Force	340 gf Max/pin	EIA-364-13B Measure force necessary to mate the connector assemblies at a rate of 50±3 mm/minute
Unmating Force	42 gf Min/pin	EIA-364-13B Measure force necessary to un-mate the connector assemblies at a rate of 50±3 mm/minute
Durability	No physical damage meet requirements of additional test as spec	EIA-364-09C Mate and un-mate connector assemblies for 50cycles at a maximum rate of 50±3 mm/minute
Contact Retention Force	0.8 Kgf Min/pin	EIA-364-29B Measure the contact retention force with Tensile strength tester at a rate of 100 mm/min
ENVIRONMENTAL		
Resistance to Wave Soldering Heat	No physical damage shall occur	Tyco spec. 109-202, Condition B. Solder Temp.: 265±5°C, 10±0.5 sec.
Resistance to Reflow Soldering Heat (for SMT type)	No physical damage shall occur.	Pre-soak condition, 85°C/85% R.H. for 168 hours. Pre Heat: 150 ~ 180°C, 90±30 sec. Heat: 230°C Min., 30±10 sec. Peak Temp.: 260+0/-5°C, 20 ~ 40 sec. Duration: 3 cycles Tyco spec. 109-201, Condition B

Figure 1 (Cont.)

ENVIRONMENTAL		
TEST ITEMS	REQUIREMENTS	PROCEDURES
Thermal Shock	See note	EIA-364-32C Subject mated connectors to 5cycles between-55 ° C and 85 ° C
Temperature Life	See note	EIA-364-17B Subject mated connectors to temperature life at 85±2 ° C for 96 hours.
Solder ability	Surface shall have Min of 95% solder coverage.	MIL-STD-202 Method 208H Subject contacts to soldering testing, temperature of 250±5 ° C for 5±0.5 sec

Figure 1 (end)

NOTE: Shall meet visual requirements, show no physical damages.

3.7. PRODUCT QUALICATION AND REQUALIFICATION TEST

Test or Examination	Test Group						
	A	B	C	D	E	F	G
	Test Sequence (a)						
Examination of Product	1, 9	1, 7	1, 5	1, 3	1, 3	1, 3	1, 3
Contact Resistance	2, 8		2, 4				
Insulation Resistance		2, 5					
Dielectric Withstanding Voltage		3, 6					
Mating Force	3, 6						
Unmating Force	4, 7						
Durability	5						
Contact Retention Force				2			
Resistance to Soldering Heat					2		
Resistance to Reflow Soldering Heat (for SMT type)						2	
Thermal Shock		4					
Temperature Life			3				
Solder ability							2

Figure 2

Note: (a) Numbers indicate sequence in which test are performed.