
0.64mm SQ Header Assembly

1. SCOPE

This specification covers the performance, tests and quality requirements for 0.64mm SQ Header Assembly.

2. APPLICABLE DOCUMENT

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.

Test Report: 501-57667

2.1. INDUSTRY STANDARDS

- EIA-364
- 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, 94V-0 rated.
- B. Contact: Copper alloy, plating: (see drawing)

3.3. RATINGS

- A. Voltage Rating: 250 VAC/DC
- B. Current Rating: 4.0 A Max.
- C. Temperature: -40°C thru 105°C

3.4. TEST CONDITION

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure1. All tests shall be performed in the room temperature unless otherwise specified.

DWN	DATE	APVD	DATE
Angus Wu	25-AUG-2005	Wei-Jer Ke	25-AUG-2005

3.5. TEST REQUIREMENTS AND PROCEDURES SUMMARY

TEST DESCRIPTION	REQUIREMENT	PROCEDURED
Examination of product	Meets requirements of product drawing and Specification.	Visual inspection No physical damage
ELECTRICAL		
Contact Resistance	10 mΩ Max. Initial 20 mΩ Max. Final	EIA-364-23B Subject mated contacts assembled in housing to 20 mV Max. open circuit at 100 mA Max.
Insulation Resistance	100 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: 500 VAC for 1 minute.
MECHANICAL		
Mating Force	1.95 N Max./pin	EIA-364-13B Measure force necessary to mate the connector assemblies at a rate of 25±3 mm/minute
Un-mating Force	0.56 N Min./pin	EIA-364-13B Measure force necessary to un-mate the connector assemblies at a rate of 25±3 mm/minute
Durability	See note	EIA-364-09C Mate and un-mate connector assemblies for 25 cycles at a maximum rate of 10 cycles/minute.
Vibration	No discontinuities of 1 microsecond or longer duration. See note	EIA-364-28D Frequency: 20 ~ 500Hz Amplitude: 1.52 mm. Duration: 15 minutes each of three mutually perpendicular planes.
Mechanical Shock	No discontinuities of 1 microsecond or long duration. See note	EIA-364-27B Subject mated connector to 50G's half-sine shock pulses of 11msec duration. Three shocks in each direction applied along three mutual perpendicular planed for a total of 18 shocks
Contact Retention Force	17.8N Min.	EIA-364-29B Measure the contact retention force with Tensile strength tester
ENVIRONMENTAL		
Resistance to Wave Soldering Heat	See note	Solder Temp.: 265±5°C, 10±0.5 sec. Tyco spec. 109-202, Condition B

Figure 1 (cont.)

ENVIRONMENTAL		
Thermal Shock	See note	EIA-364-32C Subject mated connectors to 5 cycles between -40°C and 105°C
Humidity temperature	See note	EIA-364-31B Subject mated connectors to 96 hours at 40°C with 90 ~ 95% R.H.
High Temperature Life	See note	EIA-364-17B Subject mated connectors to temperature life at 105°C for 96 hours.
Low Temperature life	See note	Subject mated connectors to temperature life at -40°C for 96 hours.
Salt Spray	See note	EIA-364-26B Subject mated connectors to 35±2°C and 5±1%°C salt condition for 48 hours.
Solder ability	Surface shall have Min. of 95% solder coverage	MIL-STD-202 Method 208H Subject contacts to soldering testing, temperature of 245±5°C for 5±0.5 sec

Figure 1 (end)

Note: Shall meet visual requirements, show no physical damage, and shall meet requirements of additional tests as specified in the Test Sequence in Figure 2.

3.6. PRODUCT QUALIFICATION AND REQUALIFICATION TEST SEQUENCE

Test or Examination	Test Group						
	A	B	C	D	E	F	G
	Test Sequence (a)						
Examination of Product	1, 9	1, 7	1, 8	1, 7	1, 5	1, 4	1, 3
Contact Resistance	2, 8	2, 4, 6		2, 4, 6	2, 4		
Insulation Resistance			2, 6				
DWV			3, 7				
Mating Force	3, 6						
Un-mating Force	4, 7						
Durability	5						
Vibration		3					
Mechanical Shock		5					
Contact Retention Force						3	
Resistance to Wave Soldering Heat							2
Thermal Shock			5				
Humidity-Temperature			4				
High Temperature Life				3			
Low Temperature Life				5			
Salt Spray					3		
Solderability						2	

Figure 2

NOTE: (a) Numbers indicate sequence in which tests are performed.