HPI CONNECTOR, WIRE TO BOARD SYSTEM

1. SCOPE

This specification covers performance, tests and quality requirements for **HPI CONNECTOR, WIRE TO BOARD SYSTEM** connector.

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：501-57391, 501-57392.

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, UL94V-0, Color: Nature.

B. Contact: Brass, Tin-lead plated on soldertails, Nickel underplated all over.

3.3. RATINGS

A. Current Rating: 3.0 A

B. Voltage Rating: 100 VAC/ DC

C. Operating temperature: -25°C to +85°C.

m each manufacturer, brand, trade names and product catalog numbers.

3.4. TEST CONDITION

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1.

3.5. TEST REQUIREMENTS AND PROCEDURES SUMMARY

TEST DESCRIPTION	REQUIREMENT	PROCEDURED
Examination of product	Meets requirements of product drawing and AMP Specification.	Visual inspection No physical damage
ELECTRICAL		
Termination Resistance	10mΩ initial ΔR=20mΩ max final	Subject mated contacts assembled in housing to closed circuit of 10mA max at open circuit Voltage of 10mV max
Insulation Resistance	1000MΩ Min initial 500MΩ Min final	MIL-STD-202 Method 302 Condition B Apply 1000V DC
Dielectric Withstanding Resistance	No creeping discharge or flashes occur	MIL-STD-202, Method 301 Connector must withstand test potential of 1000V AC for 1 min. Current leakage 5.0mA
MECHANICAL		
Insertion and withdrawal Force	0.50kgf per pin Max 0.08kgf per pin Min	Measure force to Mounting and pulling at a rate of 25mm a minute.
Tensile Strength of Wire Termination	AWG#24-29.4N (3.0Kkgf) min AWG#26-19.6N (2.0kgf) min AWG#28-9.8N (1.0kgf) min AWG#30-7.8N (0.8kgf) min	Apply an axial pull-off load to terminated wire of contact. At a rate of 100mm a minute. The load is applied in the axial and lateral directions.
Terminal retention force	See note 1.0kgf min	Measure force to Mounting and pulling at a rate of 25mm a minute.
Pin Retention force	See note 1.0kgf min	Apply an axial push force at a rate of 25mm a Minute.
ENVIRONMENTAL		
Humidity-Cycling Test	See note ΔR=20mΩ Max final	Subject mated connectors to steady stated humidity at 40℃ and 90-95% R.H for 96hrs MIL-STD-202, Method 103,condition B
Temperature Life	See note ΔR=20mΩ max final	Subject mated connector assemblies to temperature life at 85℃± 2℃ for 96 hours.
PHYSICAL		
Solderability	95% Min. See note	Temperature:230±5℃,3±0.5sec. MIL-STD-202, Method 208.

Figure 1

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

3.6. PRODUCT QUALIFICATION AND REQUALIFICATION TEST SEQUENCE

Test or Examination	Test Group				
	A	B	C	D	E
	Test Sequence (a)				
Examination of Product	1	1,8	1,5	1,3	1,3
Contact Resistance		4,6	2,4		
Insulation Resistance		2,7			
Dielectric Withstanding Resistance		3			
Insertion and Withdrawal Force	2				
Tensile Strength of Wire Termination					2
Terminal retention force	3				
Pin Retention force	4				
Humidity-Cycling Test		5			
High Temperature Life			3		
Solderability				2	

Figure 2

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