0.5mm Pitch FPC Connector, ZIF TYPE.

1. SCOPE

This specification covers performance, tests and quality requirements for **0.5mm Pitch FPC Connector, ZIF TYPE** 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：501-57251

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 High Temperature, UL94V-0, Nature color.

B. Slide: Thermoplastic High Temperature, UL94V-0, Ivory color

C. Contact: Copper Alloy, Tin-lead or Tin-copper plated, Nickel underplated all over.

3.3. RATINGS

A. Current Rating: 0.5 A

B. Voltage Rating: 250 V

C. Operating temperature: -20°C to +85°C.

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		
Contact Resistance	Initial: 35mO Max. After test: 55mO Max	a. Test voltage: 20 MV DC Max. b. Test current: Not to exceed 100 MA. MIL-STD-1344A Method 3002.1
Insulation Resistance	Initial: 100 MO Min. After test: 50 MO	a. Test condition: B b. Test voltage: 500 V DC Max. MIL-STD-202F
Dielectric Withstanding Resistance	No evidence of insulator, flashover, or excessive leakage current in excess of 0.5MA	a. Test voltage: 250 VAC at 60 Hz. b. Test duration: 60 Sec. MIL-STD-202F Method 301.
MECHANICAL		
Durability	No damage on the housing & terminal	15 mating the wire of the rate 25.4mm/ minute
Vibration	a. No evidence of physical damage b. The contacts shell be no discontinuity greater than 1 Microsecond.	a. Test condition: level II (+/-10G, 10-500-10 Hz Traversed). b. Test duration: 3 Hours along each of 3 Mutually Perpendicular planes. (9 Hours totally). c. Test board thickness: 1.6 +/- 0.02mm. MIL-STD-1344A Method 2005.
Physical Shock	a. No evidence of physical damage b. The contacts should be no discontinuity greater than 1 Microsecond.	a. Test condition: A (50G, 11ms Half-Sine). b. Number of drops: 3 Drops in each of 3 mutually Perpendicular planes. c. Test board thickness: 1.6 +/- 0.02mm. MIL-STD-202F Method 213.
Contact Retention Force	0.02 Kg Min. per pin	The test shall be performed 10pcs of each different row of contacts the crosshead should be less than 20mm per minute. MIL-STD-1344A
ENVIRONMENTAL		
Humidity-Cycling Test	Insulation Resistance: 50MO Min, Contact Resistance: 55mO Max No evidence of physical damage	a. Relative Humidity: 90+/-5%. b. Temperature: 40 ± 3 °C. c. Test duration: 240 hours. MIL-STD-202F, Method 103B
Thermal Shock	No Evidence of CRACK, CRAZE Of insulator housing.	a. Temperature range: -55 ± 5°C to 85 ± 5°C. b. Time per Temp: 30 MIN. c. Transfer time: 5 minutes Max. d. Number od cycle: 5 cycles. MIL-STD-202F, Method 107.
SALT SPRAY	Contact Resistance: 55mO Max To meet Dielectric withstanding Voltage. No evidence of physical damage	a. After 48-HOUR expose of the FPC connectors. To a SALT SPRAY chamber, in which 5% of salt (NaCl) is in place b. Temperature: 35±2°C. MIL-STD-202F, Method 101D. Condition B.

Temperature Life	No evidence of physical damage	Subject mated connector to temperature life: 105°C ±2°C for 96 hours.
PHYSICAL		
Solderability	The soldertail of contacts should be with coverage 95% MIN. in accordance.	Dip the solder tine of connector in the solder bath at 230 ±5°C for 3 ±0.5 sec. 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	F	G	H	
	Test Sequence (a)								
Examination of Product	1,9	1,9	1,9	1,9	1,4	1,6	1,4	1,6	
Low Level Contact Resistance	2,6	2,6	2,6	2,6				2,5	
Insulation Resistance	3,7	3,7	3,7	3,7					
Dielectric Withstanding Volt	4,8	4,8	4,8	4,8		2,4			
Temperature Rise Current					2				
Vibration								3	
Physical Shock								4	
FPC Retention Extraction Force					3				
Contact Retention Force						5			
Durability				5					
Solderability							2		
Resistance to soldering Heat							3		
Thermal Shock						3			
Humidity	5								
Salt Spray		5							
Temperature Life			5						

Figure 2

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