

**MINI DIN CONNECTOR****1. SCOPE**

This specification covers performance, tests and quality requirements for MINI DIN connector reverse type for lead free.

**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 : 501-57323

**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.
- B. Contact: Copper Alloy, Gold plating on contact area, Tin-lead or Tin plated on solder tails, Nickel underplated all over.

**3.3. RATINGS**

- A. Current Rating: 1 A
- B. Voltage Rating: 100 VAC
- C. Operating temperature: -55°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.

DR	DATE	CHK	DATE
Oblic Hu	09-Apr-2004	Ted Ke	09-Apr-2004
FZ00-0045-04			

### 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
<b>ELECTRICAL</b>		
Contact Resistance	30m $\Omega$ Max. Initial	EIA- 364-23A
Insulation Resistance	500M $\Omega$ Min.	EIA- 364-21B
Dielectric Withstanding Voltage	No creeping discharge or flashes occur.	EIA- 364-20A 500VAC for 1 minute applied between adjacent contacts.
<b>MECHANICAL</b>		
Durability	No mechanical defects after 500 cycles. Contact resistance shall not Exceeded 30m $\Omega$ .	EIA- 364-09 Mated and unmated connector assemblies for 500 cycles at maximum rate of 200 cycles per hour.
Mating Force	4.57kg Max.	EIA- 364-13A The test speed should be 20mm/min.
Unmating Force	0.9~3kg.	EIA- 364-13A The test speed should be 20mm/min.
<b>ENVIRONMENTAL</b>		
Humidity-Cycling Test	See note 1. See note 2.	EIA- 364-31, condition A, method II for 96 hours minimum.
Thermal Shock	See note 1. See note 2.	EIA- 364-32, condition I . Subject mated connectors to 5 cycles between -55°C and 85°C.
Temperature Life	See note1. Contact resistance shall not Exceeded 30m $\Omega$ .	EIA- 364-17, condition 3. Temperature 85°C for 250 hours.
<b>PHYSICAL</b>		
Solderability	See note 1. 95% Min.	MIL-STD-202F Method 208G. Test temperature : 245 $\pm$ 5°C. Dip tails into flux for 5 second, drain, and then dip into the solder pot and keep for 5 seconds.

Figure 1

NOTE1: Shall meet visual requirements, show no physical damages.

NOTE2: Insulation resistance shall be 500 megaohms minimum, when 500 VDC was applied. Connector shall withstand 500 VAC without flash-over, or broken.

### 3.6. PRODUCT QUALIFICATION AND REQUALIFICATION TEST SEQUENCE

Test or Examination	Test Group				
	A	B	C	D	E
	Test Sequence (a)				
Examination of Product	1,5	1,9	1,3	1,9	1,9
Contact Resistance	2,4	2,6		4,8	4,8
Insulation Resistance				2,6	2,6
Dielectric Withstanding Voltage				3,7	3,7
Durability		5			
Mating Force		3,7			
Unmating Force		4,8			
Humidity-Cycling Test				5	
Thermal Shock					5
High Temperature Life	3				
Solderability			2		

Figure 2

NOTE : Numbers indicate sequence in which tests are performed.