1. **Scope**
   This specification covers the MINI PCI Express connector series

2. **Ordering information**
   Refer to the drawing.

3. **Connector dimensions**
   Refer to the drawing.

4. **Material**
   Housing: Heat resistant polymer (UL 94V-0)
   Color :Refer to the drawing
   Terminal: Refer to the drawing
   Plating:Refer to the drawing

5. **Accommodated P.C.B layout**
   Refer to the drawing.

6. **Rating**

Operating voltage(Max.)	50V DC
Current rating(Max.)	0.5A Max. (Each Circuit)
Temperature range-operating	-40°C -- +80°C

7. **Performance**

Electrical Performance

Test Items	Procedures	Requirements	
Contact Resistance	Mate The sample connectors, measure by dry circuit, 20mV Max., 10mA Max. (EIA-364-23)	55mΩ Max(Initial) 75mΩ Max(Final)	
Insulation Resistance	Unmated The sample connectors, apply 500V DC between adjacent terminal or ground. (EIA-364-21)	500MΩ Min	
Dielectric Strength	Unmated The sample connectors, Apply 300V AC for 1minute. Test between adjacent circuit of unmated connector. (EIA-364-20)	No Breakdown. Current leakage: 0.5 mA Max.	
Temperature Rising	Mate The sample connectors and measure the temperature rise of contact when the maximum AC rated current is passed. (EIA-364-70 METHOD 2)	30°C Max. Under loaded rating current	

Mechanical Performance

Connector Mating Force	Measure force necessary to mate the connector assemblies at a rate of 25.4 mm/minute EIA-364-13	22.5N (2.3kgf) Max.	
Unmating Force	Measure force necessary to mate the connector assemblies at a rate of 25.4 mm/minute EIA-364-13	22.5N (2.3kgf) Max.	
Durability (Repeated Mating/Unmating)	Repeated insertion and extraction of P.C.B to and from the connector with the turns to lock it and then unlock it for 50 cycles. EIA-364-9	Appearance	No Damage
		Contact Resistance	75mΩ Max
Reseating	Manually unplug/plug the connector.Perform 3 such cycles.	No physical damage	

Vibration (Random)	Subject mated connectors Vibration Frequency: 10 to 55 Hz Accelerated Velocity: 30.38m/s2 (3.1G), rms. Vibration Direction: In each of 3 mutually perpendicular planes. Duration: 15 minutes each 100 mA applied. Module board should be fixed on the connector mount board or test jig. EIA-364-28 Method Ⅶ condition D	No electrical discontinuity greater than 1μsec. shall occur. 75 mΩ Max. (Final)	
Physical Shock (Normal test)	Accelerated Velocity: 490 m/s2 (50 G) Waveform: Half sine Duration: 11 m sec. Number of Drops: 3 drops each to normal and reversed directions of X, Y and Z axes, totally 18 drops. EIA-364-27 Condition A	No electrical discontinuity greater than 1μsec. shall occur. 75 mΩ Max. (Final)	
Humidity	Mated connector, 25±3～65±3℃, 50±3～80±3% R.H. 24 cycles Cold shock －10°C performed EIA-364-31	Appearance	No Damage
		Contact Resistance	75mΩ Max
		Dielectric strength	No Breakdown
		Insulation Resistance	500MΩ Min
Temperature Cycling	A connector shall and subject to the following condition for 10 cycles .Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed. 1cycle a)-40±3°C,30 minutes b) +85±3°C,30 minutes (Transit time shall be with in 3 minutes) (EIA-364-31, Test condition A)	Appearance	No Damage
		Contact Resistance	75mΩ Max
Temperature Life (Heat Aging)	Mated connector 115°C, Duration: 240 hours EIA-364-17, Method A	No physical damage ΔR=20 mΩ Max. (Final)	
Temperature Life (Preconditioning)	Mated connector 115°C, Duration: 96 hours EIA-364-17, Method A	No physical damage	
Salt Spray	Mate The sample connectors shall expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified NaCl solution Concentration:5±1% Spray time:8hours Ambient temperature:35±2°C (EIA-364-26,Test condition B)	Appearance	No Damage
		Gold Flash & 10μ" Au (8hours)	
		10μ" Au (48hours)	
Solderability	Tip of solder tails and fitting mails into the molten solder (held at 245±5°C) up to 1.6mm from the Housing for3±0.5seconds. (EIA-364-52)	Solder Wetting	95% ofimmersed area must show no voids ,pin holes
Resistance to Refow Soldering Heat	Test connector on P.C.Board Temperature: Pre-Heat150～200℃: 60~180sec. Heat 217℃ Min.: 60～150sec. Heat Peak 260 +0/-5℃ The number of reflow: 2 times	Appearance	No Damage

8. **Product qualification and reliability test sequence**

Test or Examination	Test Group											
	A	B	C	D	E	F	G	H	I	J	K	L
Appearance	1;5	1;3	1;5;8	1;4	1;4	1;4	1;3	1;3	1;5;8;11	1;5;8	1;3	1;4
Contact Resistance			2;6;9	2;5		2;5			2;6;9;12	2;6;9	2;6;9;12	2;5
Dielectric Withstanding Voltage	2;6											
Insulation Resistance	3;7											
Temperature Rising		2										
Vibration(Random)			7									
Physical Shock				3								
Contact Retention Force					2							
Insertion Force					3							
Durability						3						
Reseating									10	7	10	
Solderability							2					
Resistance to Refow Soldering Heat								2				
Humidity	4								7			
Temperature Cycling											7	
Temperature Life(Heat Aging)										4		
Temperature Life(Preconditioning)											4	
Salt Spray												3

9. Temperature condition graph

Temperature on board pattern side