

**1. Scope**

This specification covers the performance, tests and quality requirements for the DDR5 0.85 pitch Connector  
Applicable Product Models:FDR08503 series.

**2. Applicable documents**

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. 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.

**3. Ordering information**

Refer to the drawing.

**4. Connector dimensions**

Refer to the drawing.

**5. Material**

Housing: Thermoplastic (UL94V-0)

Terminal: Copper Alloy

Plating:Selective gold plated on contact area and matte tin plated on tails area

**6. Accommodated P.C.B layout**

Refer to the drawing.

**7. Rating**

Operating voltage(Max.):25V AC

Current rating(Max.) :0.75A allowable current to be applied

Temperature range-operating: -55°C -- +105°C

## 8. Performance

Serial Number	Test item	Procedure	Requirement
1	Examination Of Product	Visual inspection. (EIA-364-18)	Meets requirements of product Drawing. No physical damage.

### ELECTRICAL REQUIREMENT

2	Contact Resistance	Subject specimens mated with used module boards to 100 mA maximum and 20mV maximum open circuit voltage. Measure all 288 positions. (EIA-364-23)	20mΩ Max.
3	Insulation Resistance	500 volts DC, 2 minute hold. Test between adjacent contacts of mounted specimens. (EIA-364-21)	Minimum initial resistance: 500 MΩ
4	Dielectric withstanding Voltage	Unmated The sample connectors, Apply 500 V AC for 1 minute Test between adjacent circuit of unmated connector. (EIA-364-20)	No Breakdown
			Current leakage: 0.5 mA max.
5	Current carrying capacity.	Connect 6 consecutive contacts on 1 side of specimen in series and load with 0.75 ampere. Place a thermocouple through a small hole in the housing as close to the contact as possible. (EIA 364-70)	30°C maximum temperature rise at specified current.

MECHANICAL REQUIREMENT

6	Reseating	Manually unplug and plug module card 3 times with latches enabled.	No physical damage
7	Mating force	Measure force necessary to mate Specimens with a 1.37 mm steel gauge at a rate of 25.4 mm per minute. (EIA-364-13)	106.8N maximum.
8	Unmating force	Axial Tension/Compression machine such as an Instron Tensile Tester. Rate: 12.7 mm/min Use 1.17mm steel gauge . (EIA-364-13)	19.77N minimum.
9	Durability	Mate and unmate specimens with 1.37 mm thick steel gauge for 25 cycles at a rate of 25.4mm/minute. (EIA-364-09)	Rating of 25 cycles as determined by EIA-TS-364-1000.1
10	Vibration, random	Module thickness: 1.27 +0/-0.10mm ; Module weight 53 ± 2 g Duration: 10 minutes per axis for all 3 axes on all samples. Frequency range: 5 to 500 Hz. 5 Hz @ 0.01 g <sup>2</sup> /Hz to 20 Hz @ 0.02 g <sup>2</sup> /Hz (slope up). 20 Hz to 500 Hz @ 0.02 g <sup>2</sup> /Hz (flat). Input acceleration is 3.13 g RMS; Random control limit tolerance: ± 3dB. (EIA-364-28)	No discontinuities of 1 microsecond or longer duration.

11	Mechanical shock.	<p>Module thickness:1.27 +0/-0.10mm</p> <p>Module weight: 53±2g</p> <p>Profile: Trapezoidal shock of 50g ±10% Duration: 11 ms.</p> <p>Velocity change: 170 inches/sec±10%.</p> <p>Quantity: Three drops in each of 6 directions are applied to each of the three samples.</p> <p>(EIA-364-27)</p>	No discontinuities of 1 microsecond or longer duration.
12	Contact retention force	<p>Apply specified load to contact tail and hold for 6 seconds.</p> <p>(EIA-364-29)</p>	3 N minimum per pin. No movement of contact more than 0.38 mm
13	Boardlock retention force	<p>Apply specified load to boardlock and hold for 6 seconds.</p> <p>(EIA-364-29)</p>	13.3 N minimum per boardlock. Maximum movement of 0.38 mm.
14	Connector insertion force into PCB	<p>Press socket onto board at a rate of 12.7 mm per minute.</p> <p>(EIA-364-05)</p>	35 N maximum

ENVIRONMENT PERFORMANCE AND OTHERS

15	Resistance to Reflow soldering heat	<p>Test connector on PCB Reflow condition:</p> <p>Comply with JEDEC standard (J-STD-020C)</p>	Appearance: Nodamage
16	Thermal shock	<p>Method A, Table2, Test Condition . -55°C and 85°C, perform 5 cycles in mated condition.</p> <p>(EIA-364-32)</p>	Appearance: Nodamage

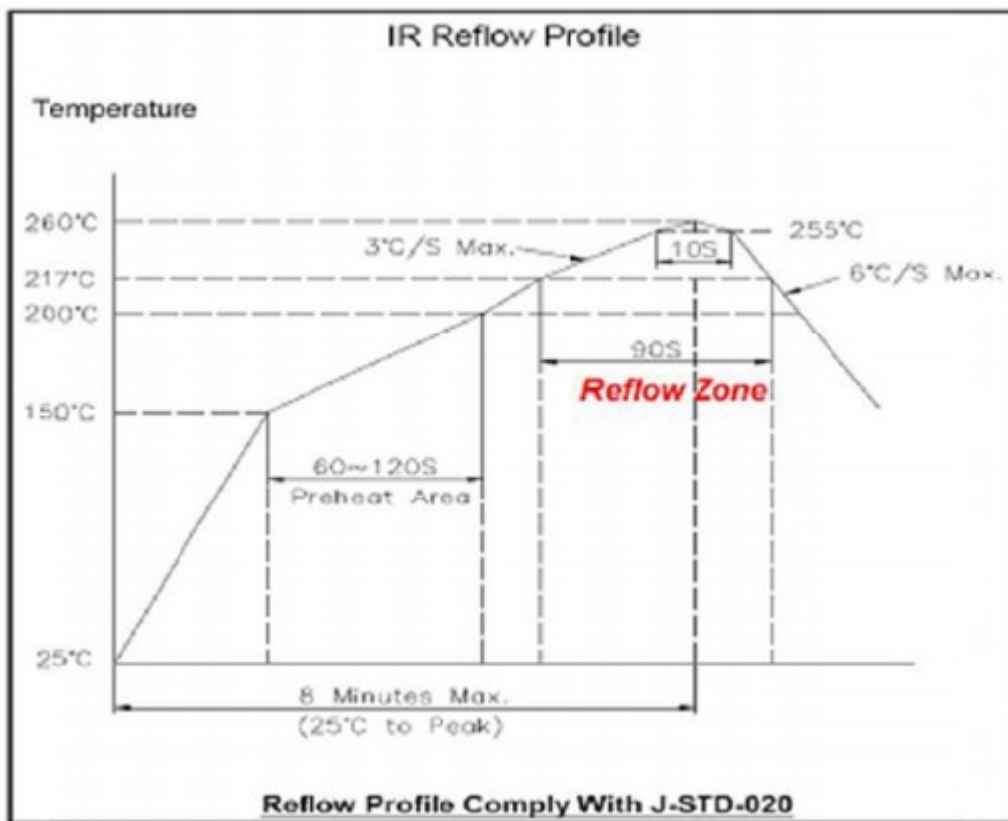
17	Cyclic Temperature & Humidity	Subject mated and mounted specimens to 24 cycles between 25°C at 80% RH and 65°C at 50% RH. Ramp times shall be 0.5 hour with 1 hour dwell time. (EIA-364-31)	Appearance: Nodamage
18	Temperature life	Subject mated and mounted specimens to 105°C for 120 hours. Subject mated and mounted specimens to 105°C for 72 hours. (EIA-364-17)	Appearance: Nodamage
19	Mixed flowing gas	30u"Au version (field life 7 years): Five specimens unmated for 160 hours, mated for 80 hours. Five specimens mated for 240 hours. Store module cards at laboratory ambient during the unmated portion of the exposure. 15u"Au version (field life 5 years): Five specimens unmated for 112 hours, mated for 56 hours. Five specimens mated for 168 hours. Store module cards at laboratory ambient during the unmated portion of the exposure.	See Note
20	Thermal disturbance	Subject mated and mounted specimens to 10 cycles between 15±3°C and 85±3°C as measured on the part. Ramps shall be a minimum of 2°C per minute. Dwell times shall ensure that the contacts reach the temperature extreme (5 minutes minimum). Humidity not controlled.	Appearance: Nodamage
21	Salt Spray	Subject mated connectors to 35+/-2 °C and 5+/-1% salt condition for 48hours. After test, rinse the sample with water and recondition the room temperature for 1 hour. (EIA-364-26B)	No detrimental corrosion allowed in contact area and base metal exposed.

22	Solderability, lead free	Unmated connector. Steam age for 8 hours +/-15 min. Dip solder tails into solder pot at a temperature of 260±5°C for 5±0.5 seconds. (JESD22-B-102)	Wet Solder Coverage: 95% minimum.  No physical damage;
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Figure 1

NOTE: Shall meet visual requirements, show no physical damage, and meet requirement of additional tests as specified in the test sequence in Figures 2

**9. The reflow temperature curve**



NOTE: Please check the reflow soldering condition by your own devices beforehand. Because the condition changes by the soldering devices, P.C. Board and so on.

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

Test or Examination	Test Group (a)									
	A	B	C	D	E	F	G	H	I	J
Initial examination of product	1	1	1	1	1	1	1	1	1	1
Low level contact resistance	2, 7, 9, 13	2, 4, 6, 8, 10	2, 5, 7, 9, 11							2, 4
Insulation Resistance	3, 10									
Withstanding Voltage	4, 11									
Current carrying capacity								2		
Reseating	12		10							
Mating force				2						
Unmating force				3						
Durability	5	3(b)	3(b)							
Vibration, random		7								
Mechanical shock		9								
Contact retention force						3				
Boardlock retention force						2				
Connector insertion force into PCB							2			
Resistance to Reflow soldering heat									2	
Thermal shock	6									
Cyclic Temperature & Humidity	8									
Temperatur lifee		5	4							
Mix e fld owing gas			6							
Thermal disturbance			8							
Salt Spray										3
Solderability, lead free					2					
Final examination of product	14	11	12	4	3	4	3	3	3	5
Test specimens	5	5	5	5	5	5	5	5	5	5

Figure 2

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

(b) Discontinuities shall not take place in this test group, during test