

SERIES:
DDR Series
FILE:
DDR Series_spec
DATE:

2013/01/04

Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of DDR Series.

Performance and Descriptions:

The product is designed to meet the electrical, mechanical and environmental performance requirements specification. Unless otherwise specified, all tests are performed at ambient environmental conditions.

RoHS:

All material in according with the RoHS environment related substances list controlled.

	MATERIAL AND FINISH							
INSULATOR	Material	Housing: LCP UL94V-0 Black						
CONTACT	Material	Contact: Phosphor Bronze C5210						
	Plating	Contact Area: Gold Flash						
SHELL OR COVER	Material	Latch: Stainless Steel SUS301						
	Plating							
RATING	Current R	nt Rating : 0.5A						
	Voltage Ra	ating: 25V AC						
	Operating	Temperature : -40∼+85°C						
	Storage Te	Storage Temperature: -40°C to +90°C						



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ELECTRICAL									
Item	Requirement	Test Condition							
Contact Resistance	Initial: 60 mΩ Max.	Solder connectors on PCB and mate them							
	Final: 80 mΩ Max.	together, measure by applying closed							
		circuit current of 10mA maximum at open							
		circuit voltage of 20mV maximum.							
Insulation Resistance	Initial: $500M\Omega$ Min.	Mate connectors, apply 100V DC (rms.)							
	Final: $100M\Omega$ Min.	between two adjacent contacts for one							
		minutes.[MIL STD. 202F, Method 302]							
Dielectric	125VAC for1 minutes.	Mate connectors, apply 125V AC (rms.)							
Withstanding Voltage	Leak current:	between two adjacent contacts for one							
	0.5 [mA] Max.	minutes.[MIL STD. 202F, Method 301]							
	·								

MECHANICAL									
Item	Requirement	Test Condition							
Durability	No Damage	Solder connectors on PCB, then repeat							
		mating and unmating 25 cycles along the							
		mating axis.							
Contact Retention	1 N/pos. Min	Place a connector on the push-pull							
Force		machine, then apply a force on a contact							
		head and push the contact to the opposi							
		direction of the contact insertion at the							
		speed of 25±3mm/min. Measure the force							
		when the contact dislodges from insulator.							
Latch Spring	8 N/Pos. Min	Place a connector on the push-pull							
Retention Force		machine, then apply a force on a contact							
		head and push the latch spring to the							
		opposite direction of the latch spring							
		insertion at the speed of 25±3mm/min.							
		Measure the force when the latch spring							
		dislodges from insulator.							



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Vibration	No electrical	Solder connectors on PCB and mate them								
	discontinuity greater	together, subject to the following vibration								
	than 1 µ second shall	conditions, for a period of 2 hours in each								
	occur.	of 3 mutually perpendicular axes, passing								
		DC 1mA current during test.								
		Amplitude: 1.52 mm P-P								
		Sweep Frequency.: 10 - 55 - 10 Hz /min								
		[MIL STD. 202F, Method 201A]								
Shock	No electrical	Solder connectors on PCB and mate them								
	discontinuity greater	together, subject to the following shock								
	than 1 µsec shall	conditions, 3 shocks shall be period along								
	occur.	3 mutually perpendicular axes, passing DC								
		1mA current during the test.								
		(Total of 18 shocks)								
		Test Pulse :								
		Half sinusoidal-Peak 490 m/s2 (50G)								
		Duration: 11 msec.								
		[MIL STD. 202F, Method 213A]								

ENVIRONMENTAL									
Item	Requirement	Test Condition							
Heat Resistance	Detrimental damage	Solder connectors on PCB and mate them							
	affecting to the	together, expose to 85±2°C for 96hours.							
	performance shall not	Upon completion of the exposure period,							
	occur.	the test specimens shall be conditioned at							
		ambient room conditions for 1 to 2 hours,							
		after which the specified measurements							
		shall be performed.							
		[MIL STD. 202F, Method 108A]							



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Cold Resistance	Detrimental damage affecting to the performance shall not occur.	Solder connectors on PCB and mate them together, expose to -40±3°C for 96hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.
Thermal Shock	Detrimental damage affecting to the performance shall not occur.	Solder connectors on PCB and mate them together, subject to the following conditions for 5 cycles. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 of 2 hours, after which the specified measurements shall be performed. Heat Cycle: a) -40°C (30min.) b) +85°C (30min.) Transit time shall be within 3 min
Humidity	Detrimental damage affecting to the performance shall not occur.	Solder connectors on PCB and mate them together, expose to the defined environment condition for 10 cycles. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition s for 1 of 2 hours, after which the specified measurements shall be performed.



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Salt Spray	Detrimental damage	Solder connectors on PCB and mate them							
	affecting to the	together, subject to the following salt mist.							
	performance shall not	Upon completion of the exposure period,							
	occur.	salt deposits shall be removed by gentle							
		wash or dip in running water, after which							
		the specified measurements shall be							
		performed.							
		NaCl solution: a) Concentration: 5±1 %							
		b) Spray time: 48±4h							
		c) Ambient Temperature : 35±1°C							
SO2 Gas	Detrimental damage	Solder connectors on PCB and mate them							
	affecting to the	together, expose to 10ppm SO2 gas,							
	performance shall not	ambient temperature 25±2 °C for 24							
	occur.	Hours.							

SOLDER ABILITY									
Item	Requirement	Test Condition							
Solderability	More then 95% of the	The solder time of connector in the solder							
	dipped surface shall	bath at 230±5°C for 3±0.5 sec. After							
	be wet evenly with	immersing solder tine in the flux for 5 to 1							
	new solder.	seconds							
Solder heat	Detrimental damage	180~200°C for 120 seconds. Max							
resistance affecting to the		220°C for 60 sec. Max							
	performance shall not	Peak : 255±5℃ 10 sec. Max							
	occur.								



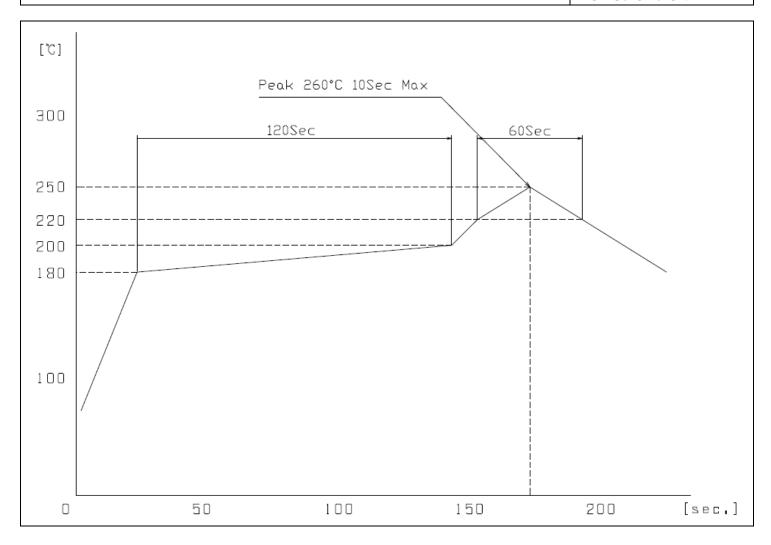
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Test Sequence

試験項目			Group												
Test Item			В	С	D	Е	F	G	Н	I	J	K	L	М	N
1	Examination of Product	1,5	1,4	1	1	1,5	1,5	1,5	1,5	1,5	1,6	1,5	1,5	1,3	1,3
2	Contact Resistance	2	3			2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4		
3	Dielectric withstanding voltage	4													
4	Insulation Resistance	3									5				
5	Durability		2												
6	Contact Retention Force			2											
7	Latch Spring Retention Force				2										
8	Vibration					3									
9	Shock						3								
10	Heat Resistance							3							
11	Cold Resistance								3						
12	Thermal Shock									3					
13	Humidity										3				
14	Salt Spray											3			
15	SO ² Gas												3		
16	Solderability													2	
17	Solder Heat Resistance														2
Connector		1	2	2	5	2	2	2	2	2	2	2	2	2	2
Mat	Mating PCB (set)		2	2	2	2	2	2	2	2	2	2	2	2	2
		Quantities of Samples													