

DDR S.O.DIMM Socket 200 Positions

1. Scope:

1.1 Contents

This specification covers the requirements for product performance, test methods and quality assurance provisions of DDR S.O.DIMM Socket 200 Positions Combine to Gold Plating S.O.DIMM.

Applicable product description and part numbers are as shown in Appendix 1.

2. Applicable Documents:

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.

2.1 AMP Specifications:

A. 109-5000	Test Specification, General Requirements for Test Methods
B. 501-5361	Test Report (Standard profile)
501-5431	Test Report (Standard profile)
501-5435	Test Report (Low profile)
501-5460	Test Report (6.5 Height)
501-5488	Test Report (9.2 Height)

2.2 Commercial Standards and Specifications:

A. MIL-STD-202

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. Contact:

Copper Alloy

Finish:

Contact area: Gold Plated
Tine area :Gold Plated
Underplate :Nickel Plated

B. Housing:

Thermo plastic UL94V-0



C. Latch:

Stainless Steal

D. Floating PegCopper Alloy, Tin Plated

3.3 Ratings:

A. Voltage Rating : 25 VACB. Current Rating : 0.5 A

C. Temperature Rating: -55 ℃ to 85 ℃

3.4 Performance Requirements and Test Descriptions :

The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified in Fig. 1. All tests shall be performed in the room temperature, unless otherwise specified.

3.5 Test Requirements and Procedures Summary

Para.	Test Items	Requirements	Procedures					
3.5.1	Examination of Product	Meets requirements of product	Visual inspection					
		drawing	No physical damage					
		Electrical Requirements						
3.5.2	Termination Resistance	30 m Ω Max. (Initial)	Subject mated contacts assembled in					
	(Low Level)	$\Delta R=20 \text{ m}\Omega$ Max. (Final)	housing to closed circuit current of 10 mA					
			Max. at open circuit voltage of 20mV Max.					
			obtain resistance value by dividing the					
			measured reading into two.					
			Fig. 3-1,3-2.					
			AMP Spec. 109-5311-1					
3.5.3	Dielectric withstanding	No creeping discharge nor	0.25 kVAC for 1 minute.					
	Voltage	flashover shall occur.	Test between adjacent circuits of unmated					
		Current leakage: 0.5 mA Max.	connectors.					
			AMP Spec. 109-5301					
3.5.4	Insulation Resistance	250MΩ Min.(Initial)	Impressed voltage 500 V DC.					
		50MΩ Min.(Final)	Test between adjacent circuits of unmated					
			connectors.					
			AMP Spec. 109-5302					
Para.	Test Items	Requirements	Procedures					
	l	Mechanical Requirements						
3.5.5	Vibration	No electrical discontinuity	Subject mated connectors to 10-55-10 Hz					
	(Low Frequency)	greater than 0.1 μ sec. shall	traversed in 1 minute at 1.52 mm					
	, , , , , , , , , , , , , , , , , , , ,	occur.	amplitude					
		$\Delta R=20 \text{ m}\Omega$ Max. (Final)	2 hours each of 3 mutually perpendicular					
			planes.					
			100 mA applied.					
			AMP Spec. 109-5201					

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3.5.6	Physical Shock	No electrical discontinuity	Accelerated Velocity: 490 m/s ² (50 G)						
		greater than 0.1 μ sec. shall	Waveform : Half sine Duration : 11 m sec.						
		occur.							
		ΔR =20 m Ω Max. (Final)	Number of Drops: 3 drops each to normal						
			and reversed directions of X, Y and Z						
			axes, totally 18 drops.						
			AMP Spec. 109-5208						
			Condition A						
3.5.7	P.C.Board Mating Force	200 Pos. : 59.8N (6.1 kgf) Max.	Operation Speed: 100 mm/min.						
			Measure the force required to mate						
			connectors.(In this test, the force required						
			to turn PCB before it engages on lacking,						
			is excluded.)						
			AMP Spec. 109-5206 Condition B						
Para.	Test Items	Requirements	Procedures						
3.5.8	Durability	ΔR =20 m Ω Max. (Final)	Repeated insertion and extraction of P.C.B						
	(Repeated	, ,	to and from the connector with the turns to						
	Mate/Unmating)		lock it and then unlock it for 25 cycles.						
3.5.9	Solder ability	Wet Solder Coverage :	Solder Temperature : 245 ± 5 ℃						
	,	95 % Min.	Immersion Duration : 5 \pm 0.5 seconds						
			Flux : Alpha 100						
			AMP Spec. 109-5203						
		Environmental Requiremen							
3.5.10	Resistance to Reflow	No physical damage shall	Test connector on P.C.Board						
0.00	Soldering Heat	occur	Pre-Heat150~180°C :90±30sec.						
	Coldoring Float	Goodi	Heat 230°C Min. :30±10sec.						
			Heat Peak260°C Max. See Fig.4-2						
			OR						
			Apply to JEDEC standard						
0 = 11	T. 101 1	15.00 0.11 (5) 1)	(J-STD-020C)						
3.5.11	Thermal Shock	$\Delta R=20 \text{ m}\Omega$ Max. (Final)	Mated connector						
			-55 °C / 30 min.,						
			85 ℃ / 30 min.						
			Making this a cycle, repeat 5 cycles.						
			AMP Spec. 109-5103 Condition A						
Para.	Test Items	Requirements	Procedures						
3.5.12	Humidity-Temperature	Insulation resistance	Mated connector, 25∼65℃,						
	Cycling	50 MΩ Min. (final)	90∼95 % R. H. 5 cycles						
		ΔR =20 m Ω Max. (Final)	Cold shock −10°C performed						
			AMP Spec. 109-5106						
3.5.13	Salt Spray	ΔR =20 m Ω Max. (Final)	Subject mated connectors to 5 % salt						
			concentration for 24 hours :						
			AMP Spec. 109-5101 Condition A						
3.5.14	Industrial Gas (SO2)	ΔR =20 m Ω Max. (Final)	Mated connector						
			SO2 Gas: 10 ppm, 95 % R. H.						
			25℃, 24 hours						
			AMP Spec. 109-5107 Condition A						
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3.5.15	Temperature Life	ΔR =20 m Ω Max. (Final)	Mated connector
	(Heat Aging)		85°C, Duration :2 days
			AMP Spec. 109-5104
			Condition A

4. Product Qualification Test Sequence

	Test Group											
Test Examination		2(b)	3(b)	4	5	6	7	8	9	10	11	12
		Test Sequence (a)										
Examination of Product	1,7	1,5	1,5	1,3	1,5	1,3	1,3	1,5	1,5	1,5	1,5	1,5
Termination Resistance (Low Level)		2,4	2,4		2,4			2,4	2,4	2,4	2,4	2,4
Dielectric withstanding Voltage	3,6											
Insulation Resistance	2,5											
Vibration (Low Frequency)		3										
Physical Shock			3									
Connector Mating Force				2								
Durability (Repeated Mate/Unmating)					3							
Solderability						2						
Resistance to Reflow Soldering Heat							2					
Thermal Shock								3				
Temperature Humidity Cycling	4											3
Salt Spray									3			
Industrial SO ₂ Gas										3		
Temperature Life (Heat Aging)											3	

FIG.2

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

(b) Discontinuities shall nit take place in this test group, during tests.

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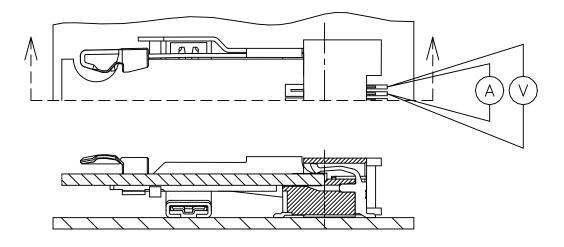


Fig.3-1 Termination Resistance Mesuring Points.

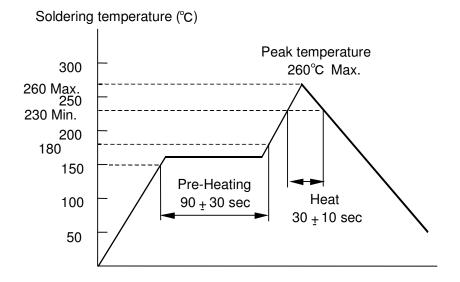


Fig.4 Temperature Profile of Reflow Soldering

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