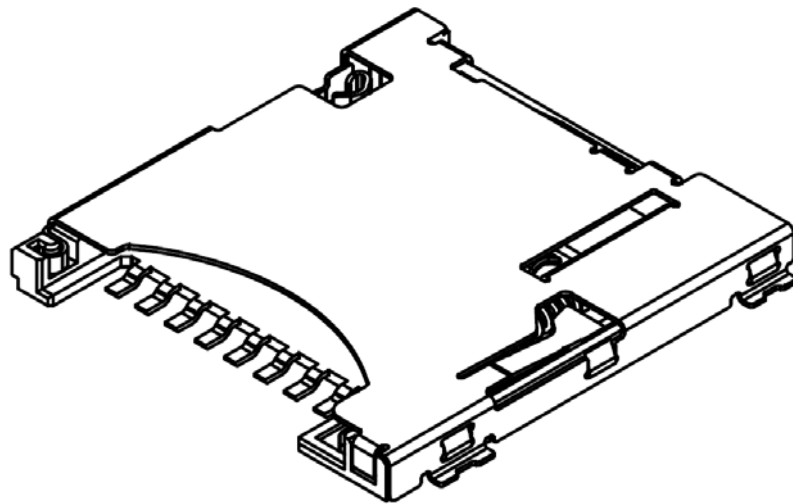


PRODUCT SPECIFICATION

Part Number	MEM2090	Rev	A	Date	15/01/24		
Product Description	Micro SD Memory Card Connector, Push-Push, SMT, 1.45mm Profile				Page	1	
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PRODUCT SPECIFICATION

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1.0 SCOPE

This specification covers performance, test and quality requirements for Micro SD Memory Card Connector MEM2090 (Push-Push, SMT, 1.45mm Profile.).

2.0 PRODUCT NAME AND PART NUMBER

MicroSD Memory Card Connector, Push-Push, SMT, 1.45mm Profile: MEM2090

3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL

Please refer to drawing.

4.0 RATINGS

- 4.1 Voltage rating 5V AC/DC
- 4.2 Current rating 0.5A AC/DC Max.
- 4.3 Operating Temperature Range -40°C TO +85°C

5.0 TEST AND MEASUREMENT CONDITIONS

Product is designed to meet electrical, mechanical and environmental performance requirements specified in Paragraph 6.0. All tests are performed in ambient conditions unless otherwise specified.

6.0 PERFORMANCE

Item	Test Condition	Requirement
Examination of Product	Visual, dimensional and functional inspection as per quality plan.	Product shall meet requirements of product drawing and specification.

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6.1 Electrical Performance

Item	Test Condition	Requirement
Contact Resistance	Measure and record contact resistance of mated connector using test current of 10mA max and 20 mV open circuit voltage in accordance with EIA-364-6B.	100mΩ max.
Insulation Resistance	Apply 500Volts DC between adjacent contacts of mated connectors for one minute in accordance with EIA-364-21C	1000MΩ min.
Dielectric Strength	Mate connectors and apply 500 V AC for 1 minute between adjacent terminal ground, in accordance with EIA-364-20B.	No Breakdown

6.2 Mechanical Performance

Item	Test Condition	Requirement
Card Retention Force	Pull the card at speed of 25mm/min.	Initial value 0.8N minimum.
Insertion/Ejection Force	Push the card at speed of 25+/- 3mm/minute.	Lock Force: 10N (1.02 kgf) Max. Lock Release Force: 10N (1.02 kgf) Max.
Durability	The connector should be mated and unmated for 10,000 cycles with 0.6mm travel at a rate of 25mm/min. In accordance with EIA-364-09.	No evidence of physical damage. Contact Resistance 100mΩ max.
Vibration	Subject mated connectors to 10 to 55 to 10 Hz frequency span over 1 minute at a 1.5mm amplitude. Test to be conducted on 3 mutually perpendicular planes for 15minutes each with 100mA applied and in accordance with EIA-364-28D.	No electrical discontinuity greater than 1 μs. shall occur. No damage to product. Contact Resistance 100mΩ max.
Mechanical Shock	Subject the part to a 294m/s ² half sine wave acceleration for 11 ms. Three shocks to be applied in each of the X, Y and Z planes and in both directions. A total of 18 shocks. Apply DC 1 mA current during test in accordance with EIA-364-27B.	No electrical discontinuity greater than 1 μs. shall occur. No damage to product. Contact Resistance 100mΩ max.

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6.3 Environmental Performance and Others

Item	Test Condition	Requirement
Thermal Shock	Mate Connector and perform the following thermal cycle: -55+/-3°C for 30 minutes. +85+/-2°C for 30 minutes. Repeat for 5 cycles in accordance with EIA-364-32C.	No evidence of physical damage, discharge, flashes or corrosion in contact areas. Contact Resistance 100mΩ max. Insulation Resistance 1000MΩ min.
Humidity Test	Mate connector and expose to temperature of 40±2°C with 95% RH for 96 hours then place in ambient temperature for 1 to 2 hrs. In accordance with EIA-364-31 method III test condition A.	
Salt Spray	Subject mated connectors to 35±2°C and 5±1% salt condition for 48hours. Test in accordance with EIA-364-26B.	
Temperature Life (High)	Subject product to 85±2°C for 96 hours continuously in accordance with EIA-364-17, method A.	
Solderability	Dip solders tails into molten solder, held at a temperature of 245±5°C for 5±0.5 seconds, in accordance with EIA-364-52.	95% of immersed area must show no voids of pin holes.
Resistance to Reflow Soldering Heat.	Mount connector, place in reflow oven and expose to the temperature profile shown in fig 1.0	No evidence of physical damage or abnormalities adversely affecting performance.

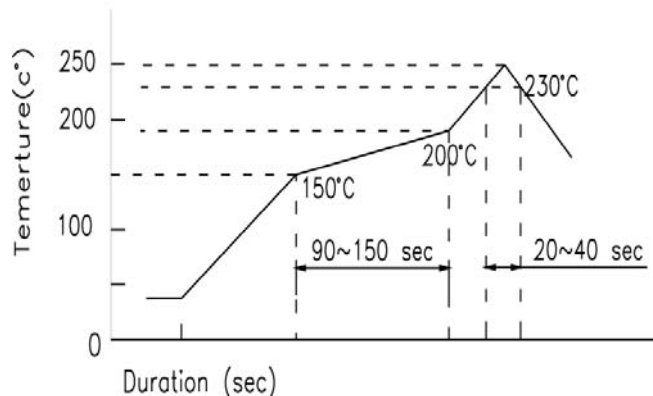


Fig.1. Recommended Reflow Temp. Profile

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7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test Item	Group						
	A	B	C	D	E	F	G
Examination of Product	1,7	1,10	1,10	1,5	1,5	1,3	1,3
Contact Resistance	3,6	2,7	2,7	2,4	2,4		
Insulation Resistance		3,8	3,8				
Dielectric Withstanding Voltage		4,9	4,9				
Mechanical shock		6					
Card Retention Force	2,5						
Insertion/Ejection Force	2,5						
Durability	4						
Vibration		5					
Humidity			6				
Salt Spray				3			
Temperature Life					3		
Thermal Shock			5				
Solderability						2	
Resistance to Reflow Soldering heat							2
Sample QTY.	5	5	5	5	5	5	5

PRODUCT SPECIFICATION

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Revision details:

Revision	Information	Page	Release Date
0.1	First draft	-	28/12/2023
0.2	Sundry changes	2, 3	10/01/2024
A	First release	-	15/01/2024

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