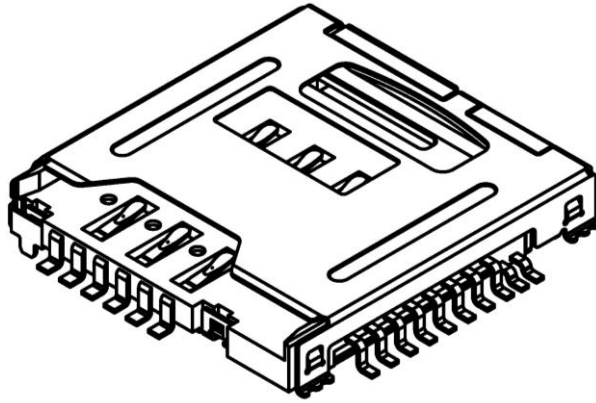


PRODUCT SPECIFICATION

Part Number	MES3051	Rev	A	Date	08/12/10		
Product Description	T-Flash Memory Card, Push-Push + SIM Card (6-Pin), Push-Pull (2-in-1 Combo Connector).			Page	1		
Doc Number	MES3051	Prepared	SA	Checked	AE	Approved	DR



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1.0 SCOPE.

This specification covers performance, tests and quality requirements for the 2-in-1 Combo Connector MES3051 (T-Flash Push-Push + SIM 6-Pin Push-Pull).

2.0 PRODUCT NAME AND PART NUMBER.

T-Flash Memory Card Connector, Push-Push plus SIM Card Push - Pull Type: MES3051.

3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL.

Please refer to drawings.

4.0 RATINGS.

4.1 Current rating 0.5A DC (per pin)

4.2 Voltage rating 5 V DC (per pin)

4.3 Operating Temperature Range -25°C TO +85°C

5.0 TEST AND MEASUREMENT CONDITIONS.

Product is designed to meet electrical, mechanical and environmental performance requirements specified in section 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 as shown in MIL-STD-1344A, Method 3002.1.	40 mΩ Initial 100 mΩ Max. at end of test
Insulation Resistance	Apply 500 Volts DC (at 10%) between adjacent contacts of mated connectors for one minute in accordance with MIL-STD-1344A, Method 3003.1.	1000 MΩ Min. initial ΔR = 100MΩ Max. final
Dielectric Strength	Test between adjacent contacts of mated/unmated connectors. MIL-STD-202 Method 301.	500V AC initial and 250V AC final at sea level for 1 minute. No creeping discharge or flashover. Current leakage less than 0.5 mA

6.2 Mechanical Performance.

Item	Test Condition	Requirement
Card Insertion/Extraction Force	Mate connector with a suitable gauge for each pin at rate of 25±3 mm/minute. Measure force when gauge reaches surface connector. MIL-STD-1344, Method 2012.1.	Insertion Force: 2.00Kgf Max. Extraction Force: 0.10Kgf Min. (applicable to both cards)
Normal Force	A suitable gauge for each pin at a rate of 25±3mm/minute. MIL-STD-1344A, Method 2012.1.	30gf Min. per pin
Durability	The sample should be mounted in the tester and fully mated and unmated to the specified number of cycles, at a rate of 25mm/minute. MIL-STD-1344A, Method 2016.	10000 cycles
Vibration	The electrical load condition shall be 100±40mA Max. for all contacts. The specimen shall then be subjected to the vibration specified by the test condition letter for the duration as specified, 1.5 hours in each of three mutually perpendicular directions. MIL-STD-1344A, Method 2005.1, Condition V, Test condition letter A	No electrical discontinuity greater than 1μ sec.

PRODUCT SPECIFICATION

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Doc Number	MES3051	Prepared	SA	Checked	AE
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Item	Test Condition	Requirement
Shock	Subject mated connectors to 50 Gs (peak value) half-sine shock pulses of 11 milliseconds duration. 3 shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks). The electrical load condition shall be 100 ±40mA Max. for all contacts. MIL-STD-1344A, Method 2004.1, Condition A.	No electrical discontinuity greater than 1µsec.

6.3 Environmental Performance and Others.

Item	Test Condition	Requirement
Thermal Shock	Subject mated connectors to 5 cycles between -55±3°C and 85±2°C, 30 minutes duration at both temperature extremes. MIL-STD-1344A, Method 1003.1, Condition A-1	Appearance: No damage Contact Resistance: 100mΩ Max.
Humidity	Mate dummy card and subject to conditions specified for 9 cycles. The test specimens shall be exposed to step 7a during only 5 out of 9 cycles. A 10 th cycle consisting of only step 1 through 6 is then performed, after which the specimens shall be conditioned at ambient room conditions of 24 hours. MIL-STD-202, Method 106.	Appearance: No damage Contact Resistance: 100mΩ Max. Dielectric Strength Insulation Resistance: 100 MΩ Min.
Salt Spray	Mate dummy card and exposed 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 measurement shall be performed. NaCl solution Concentration: 5±1% Spraytime: 24 hours Ambient Temperature: 35±°C MTL-STD-1344A, Method 1001.1, Condition B.	Appearance: No damage Contact Resistance: 100mΩ Max.

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Doc Number	MES3051	Prepared	SA	Checked	AE	Approved	DR

Item	Test Condition	Requirement
Temperature Life	Subject mated connectors to temperature life at 85±2°C for 90 hours. MTL-STD-1344A, Method 1005.1, Test Temperature Condition 3, Test Time Condition B.	Shall meet visual requirements, show no physical damage and shall meet requirements of additional tests as specified in the test sequence (section 7.0)
Solderability	Dip solders tails into molten solder, held at a temperature of 240±5°C, up to 0.5mm from the tip of tails for 5±0.5 sec.	95% of immersed area must show no voids of pin holes.
Resistance to Reflow Soldering Heat.	Without deformation of case or excessive lossen.	See Figure 1

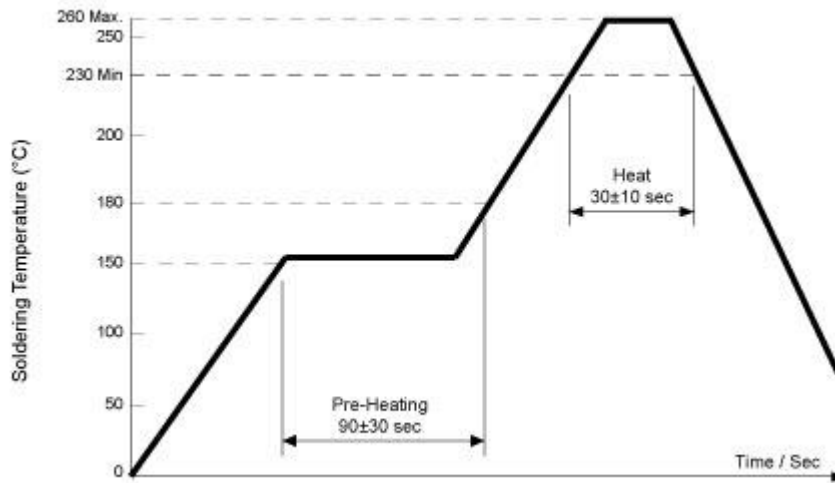


Fig.1. Temperature Profile of Reflow Soldering

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7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test Group	Test Group (a)						
	A	B	C	D	E	F	G
Examination of Product	1,5	1,6	1,3	1,10	1,5	1,9	1,3
Low-Signal Level Contact Resistance	2,4	2,5		2,7	2,4	2,6	
Insulation Resistance				3,8		3,7	
Dielectric Withstanding Voltage				4,9		4,8	
Vibration		3					
Physical Shock		4					
Durability	3						
Solderability			2				
Resistance to soldering heat							2
Thermal Shock				5			
Humidity				6			
Salt Spray					3		
Temperature Life						5	
Sample Quantity	5	5	5	5	5	5	5

Note: Shall meet visual requirements, show no physical damage and shall meet requirements of additional tests as specified in Test Sequence above.

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