PRODUCT SPECIFICATION

PRODUCT SERIES NAME: A0801M SERIES | PAGE: 1/5

1.SCOPE:

This specification covers the requirements for product performance of 0.80mm pitch wire to board connector series.

2.CONSTRUCTION、DIMENSIONS 、 MATERIAL & PLATING:

See the attached drawings

3.RATINGS & APPLICABLE WIRES:

Item	Standard		
Rated Voltage (max.)	30V AC, DC		Insulation O.D. 0.38mm (max.)
Rated Current (max.) and Applicable Wires	AWG #32	0.5A AC, DC	
Ambient Temperature Range	-25°C ~ +85°C*		

*: Including terminal temperature rise

4.PERFORMANCE:

4-1.ELECTRICAL PERFORMANCE

Test Description		Procedure	Requirement
4-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV max., 10mA. (Based upon JIS C5402 5.4)	20mΩ max.
4-1-2	Insulation Resistance	Mate connectors, apply 500V DC between adjacent terminal or ground. (Based upon JIS C5402 5.2/ MIL-STD-202 Method 302 Cond. B)	100MΩ min.
4-1-3	Dielectric Withstanding Voltage	Mate connectors, apply 200V AC (rms) for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-STD-202 Method 301)	No Breakdown
4-1-4	Contact Resistance on I.D.T. Portion	I.D.T. the applicable wire on to the terminal, measure by dry circuit, 20mV max., 10mA.	10mΩ max.

				APPROVED BY	CHECKED BY	WRITTEN BY
				Billy	Tony	Samson
A1	Add "24P"Insertion And Withdrawal Forc	2013.12.23	Samson			
A0	NEW RELEASE	2012.08.03	Samson	2012.08.03	2012.08.03	2012.08.03
REV.	DESCRIPTION	DATE	NAME	DOCUMENT NO: PS-0800-002		

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4-2.MECHANICAL PERFORMANCE

Test Description		Procedure			Requirement
4-2-1	Insertion & Withdrawal Force	Insert and withdraw connectors at the speed rate of 25 ± 3mm/minute.			Refer to paragraph 5
4-2-2	I.D.T. Pull Out Force	Fix the I.D.T. terminal, apply axial pull out force on the wire at the speed rate of 25 ± 3mm/minute. (Based upon JIS C5402 6.8)	Axial direction	AWG #32	0.6kgf min.
			Vertical direction	AWG #32	0.3kgf min.
4-2-3	Pin Retention Force	Apply axial push force at the speed rate of 25 ± 3mm/minute.			0.2kgf min.
4-2-4	Durability	When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute.		Contact Resistance	40mΩ max.
4-2-5	Vibration	Amplitude: 1.5mm P-P Sweep time: 10-55-10 Hz in 1 minute Duration: 2 hours in each X.Y.Z. axes (Based upon MIL-STD-202 Method 201A)		Appearance	No Damage
				Contact Resistance	40mΩ max.
				Discontinuity	1μsec. max.
4-2-6	Physical Shock	490m/s² {50G}, 3 strokes in each X.Y.Z. axes. (Based upon JIS C0041/MIL-STD-202 Method 213B Cond. A)		Appearance	No Damage
				Contact Resistance	40mΩ max.
				Discontinuity	1μsec. max.

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4-3.ENVIRONMENTAL PERFORMANCE AND OTHERS

Test Description		Procedure		Requirement
4-3-1	Temperature Rise	Carrying rated current load. (Based upon UL 498)	Temperature Rise	30°C max.
4-3-2	Heat Resistance	85 ± 2°C, 96 hours (Based upon JIS C0021/MIL-STD-202 Method 108A Cond. A)	Appearance	No Damage
			Contact Resistance	40mΩ max.
4-3-3	Cold Resistance	-25 ± 3°C, 96 hours (Based upon JIS C0020)	Appearance	No Damage
			Contact Resistance	40mΩ max.
4-3-4	Humidity	Temperature: 40 ± 2°C Relative Humidity: 90 ~ 95% Duration: 96 hours (Based upon JIS C0022/MIL-STD-202 Method 103B Cond. B)	Appearance	No Damage
			Contact Resistance	40mΩ max.
			Insulation Resistance	10MΩ min.
			Dielectric Withstanding Voltage	Must meet 4-1-3
4-3-5	Temperature Cycling	5 cycles of: a) - 55°C 30 minutes b) +85°C 30 minutes (Based upon JIS C0025)	Appearance	No Damage
			Contact Resistance	40mΩ max.
4-3-6	Salt Spray	24 ± 4 hours exposure to a salt spray from the 5 ± 1% solution at 35 ± 2°C. (Based upon JIS C0023/MIL-STD-202 Method 101D Cond. C)	Appearance	No Damage
			Contact Resistance	40mΩ max.
4-3-7	SO_2 Gas	24 hours exposure to 50 ± 5ppm. SO_2 gas at 40 ± 2°C.	Appearance	No Damage
			Contact Resistance	40mΩ max.
4-3-8	NH_3 Gas	40 minutes exposure to NH_3 gas evaporating from 28% Ammonia solution.	Appearance	No Damage
			Contact Resistance	40mΩ max.
4-3-9	Solderability	Soldering Time: 5 ± 0.5 sec. Solder Temperature: 245 ± 5°C	Solder Wetting	95% of immersed area must show no voids, pin holes
4-3-10	Resistance to Soldering Heat	<u>When reflowing</u> Refer to paragraph 6 <u>Solder iron method</u> Soldering Time: 3 ± 0.5 sec. Solder Temperature: 370°C ~ 400°C	Appearance	No Damage

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5.INSERTION/WITHDRAWAL FORCE:

5-1 TIN PLATED TYPE:

No. of circuits	Insertion (kgf max.)	Withdrawal (kgf min.)	No. of circuits	Insertion (kgf max.)	Withdrawal (kgf min.)
2	1.20	0.30	12	2.20	0.80
3	1.30	0.35	14	2.40	0.90
4	1.40	0.40	15	2.50	0.95
5	1.50	0.45	16	2.60	1.00
6	1.60	0.50	17	2.70	1.05
7	1.70	0.55	18	2.80	1.10
8	1.80	0.60	20	3.00	1.20
9	1.90	0.65	22	3.20	1.30
10	2.00	0.70	24	3.40	1.40

5-2 GOLD PLATED TYPE:

No. of circuits	Insertion (kgf max.)	Withdrawal (kgf min.)	No. of circuits	Insertion (kgf max.)	Withdrawal (kgf min.)
2	0.70	0.10	12	1.70	0.30
3	0.80	0.12	14	1.90	0.34
4	0.90	0.14	15	2.00	0.36
5	1.00	0.16	16	2.10	0.38
6	1.10	0.18	17	2.20	0.40
7	1.20	0.20	18	2.30	0.42
8	1.30	0.22	20	2.50	0.46
9	1.40	0.24	22	2.70	0.50
10	1.50	0.26	24	2.90	0.54

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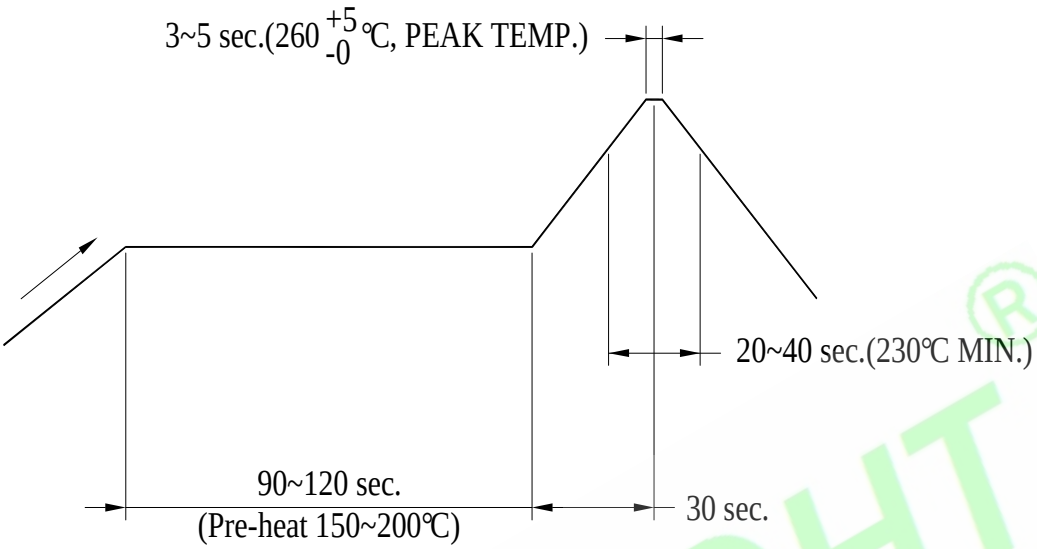
6.INFRARED REFLOW CONDITION:



TEMPERATURE CONDITION GRAPH
(TEMPERATURE ON BOARD PATTERN SIDE)

NOTE: Please check the mount condition(reflow soldering condition) by your own devices beforehand, because the condition changes by the soldering devices, p.c.boards, and so on. No moisture treatment before reflow process.