

889-271 to 889-313

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PRODUCT SPECIFICATION

[1. SCOPE]

This specification covers the 1.25mm CENTER SPACING P.C. BOARD CONNECTOR series.

[2. PRODUCT NAME AND PART NUMBER]

Product Name	Part Number
Terminal Housing Wafer Assembly "	50070-8*00
	51021-8*00
	53047-8*10 (ST)
	50040-8*10 (R/A)

** : Number of Circuits
Refer to the attached drawing.

[3. RATINGS AND APPLICABLE WIRES]

Item	Standard	
Rated Voltage (MAX.)	125V	[AC (rms) / DC] Insulation O.D.: Ø1.0mm MAX.
Rated Current (MAX.) and Applicable wires	AWG #26 1A	
	AWG #28 1A	
Ambient Temperature Range	-40°C ~ + 85°C*	

* : Including terminal temperature rise.

[4. PERFORMANCE]

4-1. Electrical Performance:

Item	Test Condition	Requirement
4-1-1 Contact resistance	Mate connectors measure by dry circuit, 20mV max., 10mA.	20mΩ MAX.
4-1-2 Insulation Resistance	Mate connectors, apply 500V DC between adjacent terminal or ground	100MΩ MIN.
4-1-3 Dielectric Strength	Mate connectors, apply 250V AC for 1 minute between adjacent terminal or ground	No breakdown
4-1-4 Contact Resistance on Crimped Portion	Crimp the applicable wire on to the terminal, measure by dry circuit, 20mV MAX., 10mA.	5mΩ MAX.

4-2. Mechanical Performance:

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Item		Test Condition	Requirement	
4-2-1	Insertion and Withdrawal Force	Insert and withdraw connectors at the speed rate of 25±3mm/minute	Refer to paragraph 6	
4-2-2	Crimping Pull Out Force	Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of 25±3mm/minute	AWG #28	1.0 Kgf MIN.
			AWG #28	1.0 Kgf MIN.
4-2-3	Terminal Insertion Force	Insert the crimped terminal into the housing	0.5 Kgf MAX.	
4-2-4	Terminal/Housing Retention Force	Apply axial pull out force at the speed rate of 25±3mm/minute on the terminal assembled in the housing	0.5 Kgf MIN.	
4-2-5	Pin Retention Force	Apply axial push force at the speed rate of 25±3mm/minute	0.5 Kgf MIN.	

4-3. ENVIRONMENTAL PERFORMANCE AND OTHERS

Item		Test Condition	Requirement	
4-3-1	Repeated Insertion/Withdrawal	When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute	Contact Resistance	40mΩ MAX.
4-3-2	Temperature Rise	Carrying rated current load		30°C MAX.
4-3-3	Vibration	Amplitude: 1.5mm P-P Sweep time: 10-55-10 Hz in 1 minute Duration: 2 hours in each X.Y.Z. axes	Appearance	No Damage
			Contact Resistance	40mΩ MAX.
			Discontinuity	1 μ sec MAX.
4-3-4	Shock	50G, 3 strokes in each X.Y.Z. axes	Appearance	No Damage
			Contact Resistance	40mΩ MAX.
			Discontinuity	1 μ sec MAX.

[6. INSERTION/WITHDRAWAL FORCE]

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[Kgf]

CKT SIZE	Insertion (MAX.)			Withdrawal (MIN.)		
	Initial	6th.	30th.	Initial	6th.	30th.
2	2.0	1.8	1.6	0.28	0.28	0.18
3	2.5	2.3	2.1	0.30	0.25	0.20
4	3.0	2.8	2.6	0.33	0.28	0.23
5	3.5	3.3	3.1	0.38	0.33	0.28
6	4.0	3.8	3.6	0.43	0.38	0.33
7	4.5	4.3	4.1	0.48	0.43	0.38
8	5.0	4.8	4.6	0.53	0.48	0.43
9	5.5	5.3	5.1	0.58	0.51	0.48
10	6.0	5.8	5.6	0.59	0.54	0.49
11	6.5	6.3	6.1	0.62	0.57	0.52
12	7.0	6.8	6.6	0.65	0.60	0.55
13	7.5	7.3	7.1	0.68	0.63	0.58
14	8.0	7.8	7.6	0.71	0.66	0.61
15	8.5	8.3	8.1	0.74	0.69	0.64

Item		Test Condition	Requirement	
4-3-5	Heat Resistance	105±2°C, 96 hours	Appearance	No Damage
			Contact Resistance	40m Ω MAX.
4-3-6	Cold Resistance	-40±3°C, 96 hours	Appearance	No Damage
			Contact Resistance	40m Ω MAX.
4-3-7	Humidity	Temperature: 60±2°C Relative Humidity: 90~95% Duration: 96 hours	Appearance	No Damage
			Contact Resistance	40m Ω MAX.
			Dielectric Strength	Must meet 4-1-3
			Insulation Resistance	10M Ω MIN.
4-3-8	Temperature Cycling	5 cycles: a) - 55°C 30 MIN. b) +105°C 30 MIN.	Appearance	No Damage
			Contact Resistance	40m Ω MAX.
4-3-9	Salt Spray	48±4 hours exposure to a salt spray from the 5±1% solution at 35°C	Appearance	No Damage
			Contact Resistance	40m Ω MAX.
4-3-10	SO ₂ Gas	24 hours exposure to 50±5ppm. SO ₂ gas at 40°C	Appearance	No Damage
			Contact Resistance	40m Ω MAX.
4-3-11	NH ₃ Gas	40 minutes exposure to NH ₃ gas evaporating from 28% Ammonia solution	Appearance	No Damage
			Contact Resistance	40m Ω MAX.
4-3-12	Solder-ability	Soldering time: 3±0.5 sec Solder temperature: 230±5°C	95% of Immersed area must show no voids, pin holes	
4-3-13	Resistance to Soldering Heat	Soldering time: 3±0.5 sec Solder temperature: 280±5°C	No Damage	

[5. PRODUCT SHAPE, DIMENSIONS AND MATERIALS]
Refer to the attached drawing.

REV. A

