



PRODUCT SPECIFICATION

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1.SCOPE:

This specification covers the requirements for product performance of 2.54 mm pitch wire to board connector series.

2.PART NAME & PART NUMBERS

Part name	Part number
Housing	A2547H/HA/HB/HC/HD/HE/HF/HG/HJ/HK A2547HM/HMA/HMB/HMC/HMD
Terminal	A2547-T A2547-T-B/C/D A2547M-T A2547M-T-B
Wafer	A2547HI/HIA A2547WV/WVA/WVB/WVC/WVD/WVE/WVF/WVI
	A2547WR/A2547WRA/A2547WRB/WRC/WRD/WRE/WRF

3. CONSTRUCTION. DIMENSIONS . MATERIAL & SURFACE FINISH

Construction and dimensions shall be in accordance with the referenced drawings.
Material and surface finish shall be as specified below.

Part name		Material	Surface finish
Housing		PBT/Nylon 66	UL94V-0
Terminal		Phosphor bronze/Brass	Gold over Nickel/Tin over Nickel
Wafer	Post	Brass/Phosphor bronze	Gold over Nickel/Tin over Nickel
	Body	PBT/Nylon 6T/Nylon 9T/LCP	UL94V-0

4. RATINGS & APPLICABLE WIRES

Item	Standard		
Rated Voltage (max.)	250V AC DC		Insulation O.D. 1.40mm (max.)
Rated Current (max.) and Applicable Wires	AWG #22	3.0A AC DC (W-B 2-circuit)	
	AWG #24	3.0A AC DC (W-B 2-circuit)	
	AWG #26	1.8A AC DC (W-B 2-circuit)	
	AWG #28	1.2A AC DC (W-B 2-circuit)	
	AWG #30	0.5A AC DC (W-B 2-circuit)	
Ambient Temperature Range	-40℃~105℃*		

*: Including terminal temperature rise

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5. CONDITIONS:

Number	Item	Requirement
①	Bend up	4°max.
	Bend down	4°max.
	Twisting	3°max.
	Rolling	8°max.
②	Bell mouth (flare)	0.2-0.5 mm
③	Cut-off tab length	0.2 mm max.
④	Extruded wire length	0-0.5 mm
⑤	Seam	Seam shall not be opened and no wire
⑥	Wire strip length	1.2-1.7 mm ref.
⑦	Lance height	0.3 mm ref.

After crimping, the crimped areas [⑤、⑥] should be as follows.

Wire Size (AWG)	Terminal Part Number	Conductor(mm)		Insulation(mm)		Crimp Strength (Kg)
		Crimp Width	Crimp Height	Crimp Width	Crimp Height	
#22	A2547-T(-L)	1.40±0.15	0.80~0.90	1.80 (max)	1.75(max)	4.00(min)
#24	A2547-T-B		0.70~0.80		1.55(max)	3.00(min)
#26	A2547-T-C(-L)		0.60~0.70		1.50(max)	1.80(min)
#28	A2547-T-D		0.50~0.60		1.40(max)	1.00(min)
#30	A2547M-T(-L)		0.45~0.55		1.30(max)	0.70(min)
	A2547M-T-B					

Note: no distorted after terminal crimped.

6. PERFORMANCE
6.1 ELECTRICAL PERFORMANCE

Test Description		Procedure	Requirement
6-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV max. 10mA. (Based upon JIS C5402 5.4)	20mΩ max.
6-1-2	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)	1000MΩ min.
6-1-3	Dielectric Withstanding Voltage	Mate connectors, apply 1500V AC (rms) for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-STD-202 Method 301)	No Breakdown

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6.2 MECHANICAL PERFORMANCE

Test Description		Procedure		Requirement
6-2-1	Insertion & Withdrawal Force	Insert and withdraw connectors at the speed rate of 25 ± 3 mm/minute.		0.45kgf per circuit MAX mate force & 0.06kgf per circuit MIN unmate force Used with A2547-T-C terminal: 0.22kgf per circuit MAX mate force & 0.04kgf per circuit MIN unmate force
6-2-2	Crimping Pull Out Force	Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of 25 ± 3 mm/minute. (Based upon JIS C5402 6.8)	AWG #22	39.2N/4.0kgf min.
			AWG #24	29.4N/3.0kgf min.
			AWG #26	19.6N/2.0kgf min.
			AWG #28	9.8N/1.0kgf min.
			AWG #30	4.9N/0.5kgf min.
6-2-3	Terminal/Housing Retention Force	Apply axial pull out force at the speed rate of 25 ± 3 mm/minute on the terminal assembled in the housing.		17.79N/1.80kgf min.
6-2-4	Pin Retention Force	Apply axial push force at the speed rate of 25 ± 3 mm/minute.		14.7N/1.50kgf min.
6-2-5	Durability	When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute.	Contact Resistance	40mΩ max.
6-2-6	Vibration	Amplitude: 1.52mm 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.
6-2-7	Physical Shock	490m/s ² {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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6.3 ENVIRONMENTAL PERFORMANCE AND OTHERS

Test Description		Procedure		Requirement
6-3-1	Temperature Rise	Carrying rated current load. (Based upon UL 498)	Temperature Rise	30°C max.
6-3-2	Heat Resistance	105 ± 2°C, 96 hours (Based upon JIS C0021/MIL-STD-202 Method 108A Cond. A)	Appearance	No Damage
			Contact Resistance	40mΩ max.
6-3-3	Cold Resistance	-40 ± 3°C, 96 hours (Based upon JIS C0020)	Appearance	No Damage
			Contact Resistance	40mΩ max.
6-3-4	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	500MΩ min.
			Dielectric Withstandin	Must meet 6-1-3
6-3-5	Temperature Cycling	5 cycles of: a) - 40°C 30 minutes b) +105°C 30 minutes (Based upon JIS C0025)	Appearance	No Damage
			Contact Resistance	40mΩ max.
6-3-6	Salt Spray	24 hours exposure to a salt spray from the 5 % solution at 35 ± 2°C. (Based upon JIS C0023/MIL-STD-202 Method 101D Cond. B)	Appearance	No Damage
			Contact Resistance	40mΩ max.
6-3-7	Solderability	Soldering Time: 3~5 sec. Solder Temperature: 240 ± 5°C	Solder Wetting	95% of immersed area must show no voids, pin holes
6-3-8	Resistance to Soldering Heat	<u>Normal materials</u> Soldering Time: 3~5 sec. Solder Temperature: 250 ± 5°C <u>High temperature resistant materials</u> Soldering Time: 3~5 sec. Solder Temperature: 260 ± 5°C	Appearance	No Damage