

5557-5569 SERIES

Scope: This specification covers the 4.0mm spacing WIRE TO BOARD/WIRE TO
WIRE Connector series.

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Note: 以上测试视公司之测试条件/能力而定。

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ECR/N B	New spec			

[1. Product name and part number]

Product Name	Part Number
Socket Terminal	5557-T (高脚) / 5557-T (低脚)
Pin Terminal	5559-T
Plug Housing(for socket terminal)	5557-NY/5557-2×NY
Receptacle Housing(for pin terminal)	5559-NA/5559-2×NA
Wafer Assembly ST. (DIP)	5566-2xNA/5557-2xNA
Wafer Assembly R.A (DIP)	5557-2xNAW

[2. Ratings and applicable wires]

ITEM	STANDARD
Rated Voltage	600V DC,AC(rms)
Rated Current	7A (AWG#16)
Applicable Wires	AWG#16~#28
Insulation O.D	Ø3.1mm(max.)
Ambient Temperature	-40°C~+105°C*

* : Including terminal temperature rise.

[3. Performance]

3-1. Electrical Performance

ITEM		Test condition	Requirement
3-1-1	Contact resistance	Mate connectors, measure by dry circuit, 20mV MAX., 10mA. Mated Length : 50mm (Based upon JIS C5402 5.4)	10mΩ(max.)
3-1-2	Insulation resistance	Mate connectors, apply 500V DC between adjacent terminals or ground. (Based upon JIS C5402 5.2/MIL-STD-202 method 302 cond.B)	1000MΩ(min.)
3-1-3	Dielectric strength	Mate connectors, apply 1500V AC for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-STD-202 Method301)	No breakdown and flashover

3-1-4	Contact resistance on crimped portion	Crimp the maximum applicable wire on to the terminal, measure by dry circuit, 20mV MAX., 10mA. Wire Length : 50mm	10mΩ(max.)
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3-2. Mechanical Performance

ITEM		Test condition	Requirement
3-2-1	Crimping pull out force	Fix the crimped terminal, apply axial pull out force on the wire at a speed of 25±3mm/minute (Based upon JIS C5402 6.22)	AWG#16: 9.0Kgf(min.) AWG#18: 9.0Kgf(min.) AWG#20: 6.0Kgf(min.) AWG#22: 4.0Kgf(min.) AWG#24: 2.9Kgf(min.) AWG#26: 1.9Kgf(min.) AWG#28: 1.0Kgf(min.)
3-2-3	Terminal insertion force	Insert the crimped terminal into the housing at a speed of 25±3mm/minute	1.5kgf (max.)
3-2-4	Terminal/Housing retention force	Apply axial pull out force at a speed of 25±3mm/minute on the terminal assembled In the housing.	3.0kgf (min.)
3-2-5	Pin retention force	Apply axial push force at a speed of 25±3mm/minute on the contact pin assembled in the base wafer.	1.0kgf (min.)

3-3. Environmental Performance and Others

ITEM		Test condition	Requirement	
3-3-1	Repeated insertion/ withdrawal	Mate connector up to 30 cycles repeatedly at a rate of 10 cycles/ minute. After which test the contact resistance	Contact resistance	20mΩ (max.)
3-3-2	Temperature rise	Apply rated current load on mated connector in series-connection. Measure change of temperature on contact using thermocouples for 4 hours. (Based upon UL 1977)		30°C (max.)

3-3-3	Vibration	Amplitude: 1.52mm Sweep time: 10-55-10Hz/minute Duration: 2 Hours in each X、Y、Z axlals (Based upon MIL-STD-202 method 201)	Appearance	No Damage
			Contact Resistance	20mΩ (max.)
			Discontinui-ty	1μ sec (max.)
3-3-4	Shock	50G, 3 strokes in each X、Y、Z. axlals. (Based upon JIS C0041)	Appearance	No Damage
			Contact Resistance	20mΩ (max.)
			Discontinui-ty	1μ sec (max.)
3-3-5	Heat resistance	Mated connector shall be placed in an oven for 96±4 hours at +105±2°C. (Based upon JIS C5402 7.8)	Appearance	No Damage
			Contact Resistance	20mΩ (max.)
3-3-6	Cold resistance	Mated connector shall be placed in a temperature chamber for 96±4 hours at -40±3°C (Based upon JIS C5402 7.9)	Appearance	No Damage
			Contact Resistance	20mΩ (max.)
3-3-7	Humidity	Mated connector shall be placed in a humidity chamber on the following conditions. Temperature: 40±2°C Relative humidity: 90~95% Duration : 96 Hours (Based upon MIL-STD-202 Method 103 condition A)	Appearance	No Damage
			Contact Resistance	20mΩ (max.)
			Dielectric strength	Must meet 3-1-3
			Insulation resistance	100MΩ (min.)
3-3-8	Temperature cycling	Mated connector shall be set to temperature cycling for 5 cycles of which 1 cycle consists of: 1>.-55°C ~ 30 minutes 2>.+105°C ~ 30 minutes (Based upon JIS C0025)	Appearance	No Damage
			Contact Resistance	20mΩ (max.)

3-3-9	Salt spray	Mated connector shall be placed in a salt spray chamber on the following conditions. Salt Solution Density : $5\pm 1\%$ Temperature : $35\pm 2^{\circ}\text{C}$ Duration : First punch,second plate: 24 ± 4 Hours First plate,second punch: 8 ± 2 Hours Remarks : we make sure the important area	Appearance	No Damage
			Contact Resistance	$20\text{m}\Omega$ (max.)
3-3- 10	Solderability	Immerse fluxed soldered section of contact pin into a solder bath for 3 ± 0.5 sec, temperature: $230\pm 5^{\circ}\text{C}$	95% of immersed area must show no voids nor pin holes.	
3-3- 11	Resistance to soldering heat	Mated connector shall be dipped on solder bath for 5 ± 1 sec, temperature: $260\pm 5^{\circ}\text{C}$	No Damage in appearance	

[4. Product shape, Dimensions and materials]
Refer to the drawing

