PRODUCT SPECIFICATION

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Product Description	Spring Contact Terminal, H=3.50mm, SMT, Copper Alloy					**Page**	1
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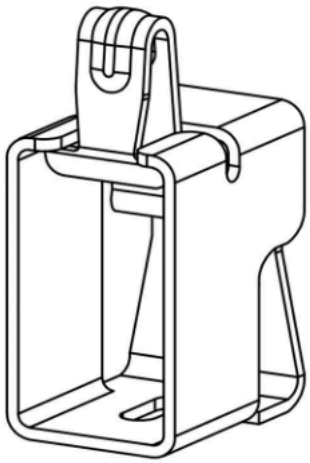

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1.0 SCOPE

This specification covers performance, tests and quality requirements for Spring Contact Terminal, H=3.50mm, SCC10-290 series.

2.0 PRODUCT NAME AND PART NUMBER

Spring Contact Terminal, H=3.50mm, SCC10-290 series

3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL

Please refer to drawing.

4.0 RATINGS

4.1 Current rating …….. 1A AC/DC

4.2 Operating Temperature Range …… -40°C to +85°C

4.3 Storage Temp Range …… -10°C to +60°C, Relative Humidity 15%-70%

5.0 TEST AND MEASUREMENT CONDITIONS

Product is designed to meet electrical, mechanical and environmental performance requirements. specified in Paragraph 6.0. All tests are performed at ambient environmental 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 using test current of 10mA max and 20 mV open circuit voltage in accordance with EIA-364-23.	50mΩ max initial 80mΩ max after test.
Temperature Rise	Mated connector and measure the temperature rise at the rated current 1A. In accordance with EIA-364-70.	30°C Max.

6.2 Mechanical Performance

Item	Test Condition	Requirement
Contact Normal Force	Perform the measurement at a speed of 25.4mm per minute. Press the contact top to spring 2.9mm height.	0.4N Min.
Durability	Press the contact top to spring 2.9mm height for 1500 cycles at a cycle rate 500±50 cycles per hour. In accordance with EIA-364-09.	No Damage Contact Resistance: 80mΩ max. Contact Normal Force: 0.4N Min.
Vibration	Subject mated connector 1. Random Vibration: Frequency 20~1000Hz, 0.04g²/Hz, 1000~2000HZ, -6dB/Octave, Time: 1 hours each of 3 directions (XYZ) 2.Sinusoidal Vibration frequency range: 10-55-10 Hz Amplitude: 1.52 mm Time: 2 hours each of 3 directions (XYZ) In accordance with IEC60068-2-64.	No Damage No electrical discontinuity greater than 1 μs shall occur. Contact resistance: 80mΩ max.
Mechanical Shock	Mated connector and subjected to the following shock conditions: 3 mutually perpendicular axis, three shocks in each direction, total of 18 shocks. Waveform: Half sine peak value Velocity Change: 3.44m/s Peak acceleration: 490m/s2 (50G) duration：11ms In accordance with EIA-364-27.	No Damage No electrical discontinuity greater than 1 μs. shall occur. Contact resistance: 80mΩ max.

6.3 Environmental Performance and Others

Item	Test Condition	Requirement
Thermal Shock	Mated connector and exposed to the following condition for 5 cycles. 1 cycle a) -55+0°C/-3°C for 30 minutes. b) +85+3°C/-0°C for 30 minutes. Transit time shall be within 5 minutes. Recovery time 1~2 hours. In accordance with EIA-364-32.	No Damage Contact Resistance: 80mΩ max.
Temperature Humidity Cycling	Exposed connector to the condition of 25±3°C to 65±3°C, 90~98% humidity for 24 hours a cycle, repeat 10 cycles. In accordance with EIA-364-31.	No Damage Contact Resistance: 80mΩ max.
Salt Spray	Subject connector to 5±1% salt-solution concentration, 35±2°C for 24 hours. In accordance with EIA-364-26, Test Condition B.	No rusty cracks found. Contact Resistance: 80mΩ max.
Temperature Life (High)	Subject mated connector to 85±2°C for 96 hours continuously. EIA-364-17	No Damage Contact Resistance: 80mΩ max.
Solderability	Dip solders tails into molten solder, held at a temperature of 250±5°C up to 0.5mm from the tip of the tails for 3±0.5 seconds.	Contact solder pad has a min. 95% solder coverage
Resistance to Reflow Soldering Heat.	Mount connector, place in reflow oven and expose to the temperature profile shown in fig 1.0	No evidence of physical damage or abnormalities adversely affecting performance.

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7.0 REFLOW SOLDERING PROFILE

Pb-free reflow profile requirements

Parameter	Reference	Specification
Average temperature gradient in preheating		2.5°C/s
Soak time	tsoak	2-3 minutes
Time above 217°C	t1	60 s
Time above 230°C	t2	50 s
Time above 250°C	t3	5 s
Peak temperature in reflow	Tpeak	255°C (–0/+5°C)
Temperature gradient in cooling		Max -5°C/s

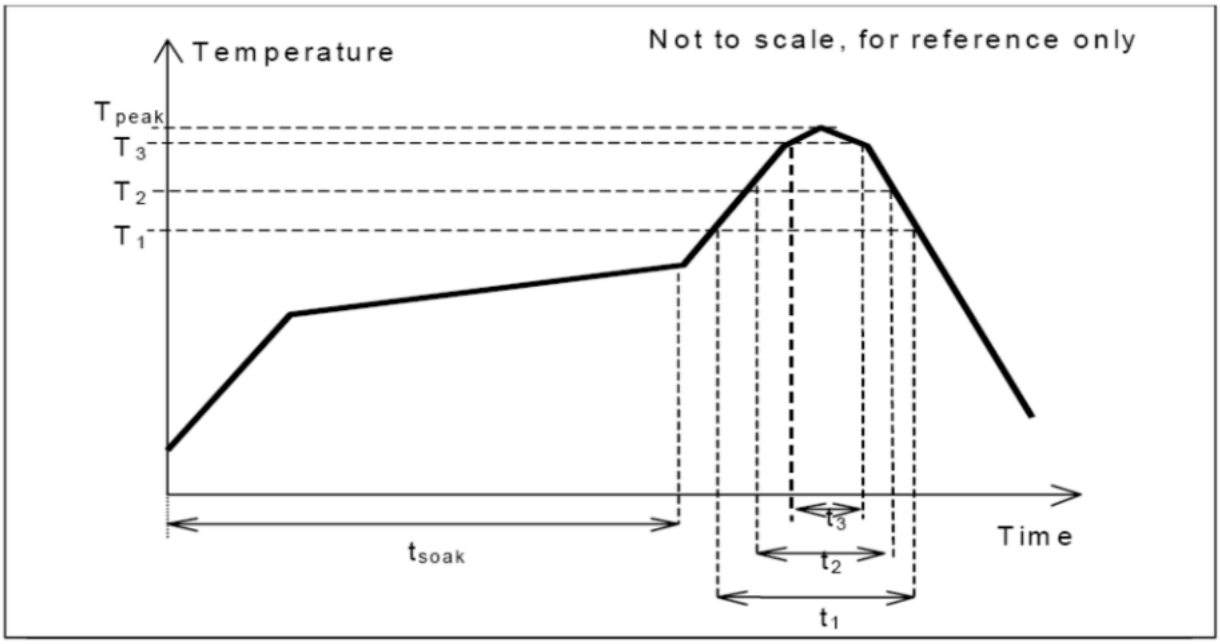

Fig 1.0, this profile is the minimum requirement for evaluating soldering heat resistance of components. Heat transfer method used for reflow soldering is hot air convection. The actual air temperatures used to achieve the specified profile is higher and largely dependent on the reflow equipment.

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8.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test Item	**Group**								
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
Examination of Product	**1,7**	**1,3**	**1,6**	**1,5**	**1,5**	**1.3**	**1,3**	**1,3**	**1,**
Contact Resistance	**2,6**		**2,5**	**2,4**	**2,4**	**2,4**	**2,4**		
Temperature Rise		**2**							
Contact Normal Force	**3,5**								
Durability	**4**								
Vibration			**3**						
Shock			**4**						
Thermal Shock				**3**					
Temperature Humidity cycling					**3**				
Salt Spray						**3**			
Temperature Life							**3**		
Solderability								**2**	
Resistance to Soldering Heat									**2**

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Revision details:

Revision	Information	Page	Release Date
0.1	First draft	-	28/02/2025
0.2	Updated after review	-	12/03/2025
A	First Release	-	24/03/2025