



<b>Product Specification :</b>	ISSUED BY: Engineering Dept	
<b>Subject :</b> 1.00mm Pitch SCT1009 Series Connector Specification	Date Issued	2010/06/05
	Date Revised	2016/10/18

This specification is referred to the 1.00mm series wire to board connector

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## 1. Scope

This Specification Covers the 1.00mm Pitch SCT1005 Series Connector Specification.

## 2. Spec and Part number

Specification	Production No.	Picture of Product
Terminal	SCT1009TPG104	NONE
Housing	SCT1009H-xxBWT104	NONE
Wafer	/	NONE

## 3. Disposal of Material and surface

Specification	Materials	Disposal of Surface
Terminal	Phosphor Bronze	Nickel: Over 30 $\mu$ " . Gold Plated
Housing	PA66/LCT and Stainless Steel	UL 94V-0
/	/	/
/	/	/
/	/	/

( Please Refer to the Project drawing for the above Specification )

## 4. Ratings and applicable wires

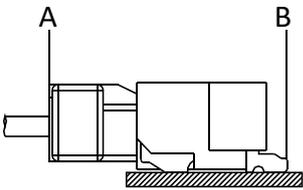
Item	Standard	
Rated Voltage (Max.)	300V	[AC/DC]
Rated Current (Max.)	0.5A	
Ambient temperature Range	-25 $^{\circ}$ C~+85 $^{\circ}$ C	
Applicable wire insulation O.D	AWG 28#~36# Insulation O.D. 0.80mm(Max.)	

\*Including terminal temperature rise.

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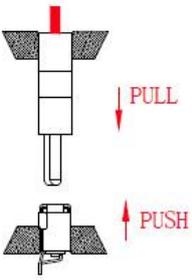
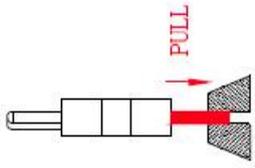
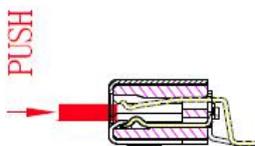
## 5. PERFORMANCE

### 5-1. Electrical Performance.

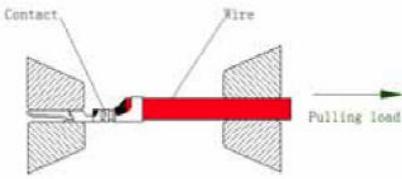
Item		Test Condition	Requirement
5-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A).  	Initial: 40 milliohms Max. After Test: 80 milliohms Max.
5-1-2	Insulation Resistance	Mate connectors, apply 100V DC between adjacent terminal or ground. (Based upon EIA-364-21B/MIL-STD-202 Method 302 Cond.B)	100 Megohms Min.
5-1-3	Dielectric Strength	Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground. (Based upon EIA-364-20A/MIL-STD-202 Method 301)	No Breakdown and Flashover
5-1-4	Contact resistance on crimped portion	Crimp the applicable wire on to the terminal measure by dry circuit 20mV MAX, 10mA.	20 milliohms Max.

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## 5-2. Mechanical Performance.

Item	Test Condition	Requirement
5-2-1	Insertion & Retention Force 	Refer to paragraph 6
5-2-2	Terminal /Housing Retention Force 	4.9N {0.5kgf} Min.
5-2-3	Terminal Insertion Force Insert the crimped terminal into the housing.	4.9N {0.5kgf} Max.
5-2-4	Lock Retention Force With every points at a rate of 25.4 + / - 3 mm, the HSG needle from within the Wafer axial pull out the power of test HSG Lock retention	49N {5.0kgf} Min.
5-2-5	Pin Retention Force Apply axial push force at the speed of 25.4±3mm/minute. 	1.47N {0.15kgf} min.

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Item		Test Condition	Requirement			
5-2-5	Tensile strength (Crimped connections)	Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part).  	AWG#	#28	#30	#32
			Spec.kgf. Min.	1.0	0.5	0.3
			Note> As for unspecified wire sizes in this specification define values with clients			

### 5-3. Environmental Performance and Others.

Item		Test Condition	Requirement	
5-3-1	Repeated Insertion/ Withdrawal	When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute.	Contact Resistance	80 milliohms Max.
5-3-2	Temperature Rise	Carrying rated current load. (UL 1977)	Temperature rise	30°C Max.
5-3-3	Vibration	Amplitude: 1.5mm P-P Sweep time: 10~55~10 HZ in 1 minute Duration: 2 hours in each X.Y.Z axials. (Based upon EIA-364-28B/MIL-STD-202 Method 213B Cond.A)	Appearance	No Damage
			Contact Resistance	80 milliohms Max.
			Discontinuity	1 micro-second Max.
5-3-4	Shock	490m/s <sup>2</sup> {50G}, 3 strokes in each X.Y.Z. axes. (Based upon EIA-364-27B/MIL-STD-202 Method 213B Cond.A)	Appearance	No Damage
			Contact Resistance	80 milliohms Max.
			Discontinuity	1 micro-second Max.



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5-3-5	Heat Resistance	85±2℃,96 hours. (Based upon MIL-STD-202 Method 108A Cond.A)	Appearance	No Damage
			Contact Resistance	80milliohms Max.
5-3-6	Cold Resistance	-25±5℃,96 hours. ( Based upon EIA-364-105)	Appearance	No Damage
			Contact Resistance	80milliohms Max.
5-3-7	Humidity	Temperature: 40±2℃ Relative Humidity: 90~95% Duration: 96 hours (Based upon EIA-364-31A/MIL-STD-202 Method 103B Cond.B)	Appearance	No Damage
			Contact Resistance	80milliohms Max.
			Dielectric Strength	Must meet 5-1-3
			Insulation Resistance	50Megohms Min.
5-3-8	Temperature Cycling	5 cycles of: a) -55℃ 30 minutes. b) +85℃ 30 minutes. (Based upon EIA-364-32B)	Appearance	No Damage
			Contact Resistance	80milliohms Max.
5-3-9	Salt Spray	24±1 hours exposure to a salt spray from the 5±1% solution at 35±2℃. (Based upon EIA-364-26A/MIL-STD-202 Method 101D Cond.B).	Appearance	No Damage
			Contact Resistance	80milliohms Max.
5-3-10	Solderability	Soldering Time: 5±0.5second. Solder Temperature: 245±5℃. (Based upon EIA-364-52)	Solder Wetting	95% of immersed area must show no voids, pin holes.

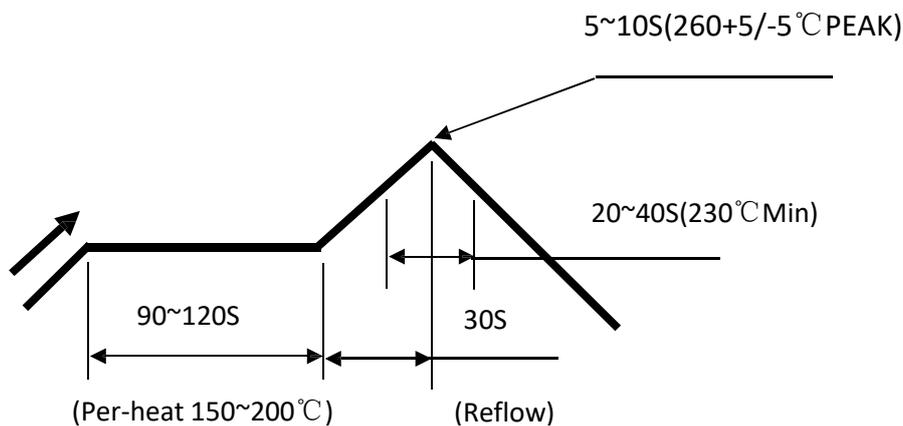
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Item		Test Condition	Requirement	
5-3-11	Solder-Resistance	Soldering time:5~10 sec solder. Temperature:260+5/-5°C. (Based upon EIA-364-56A)	Appearance	No Damage

## 6. INSERTION/WITHDRAWAL FORCE <Connector mating force>

No. of CKT	First Insertion (kgf Max.)	30 <sup>th</sup> Withdrawal (kgf Min.)	No. of CKT	First Insertion (kgf Max.)	30 <sup>th</sup> Withdrawal (kgf Min.)
30	6.50	0.80			

## 7. SMT SMT INFRARED REFLOW CONDITION



TEMPERATURE CONDITION GRAPH/ (TEMPERATURE ON BOARD PATTERN SIDE)

Notes: Please check the reflow soldering condition by your own devices beforehand. Because the condition changes by the soldering devices, P.C. boards, and so on.