



Product Specification :	ISSUED BY: Engineering Dept	
Subject : 2.00mm Pitch SCT2004 Series Connector Specification	Date Issued	2014/02/20
	Date Revised	2014/03/23

This specification is referred to the 2.00mm series wire to board connector

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1. Scope

This Specification Covers the 2.00mm Pitch SCT2004 Series Connector Specification.

2. Spec and Part number

Specification	Production No.	Picture of Product
Terminal	SCT2004TPS112	NONE
Housing	SCT2004H-2xxCWT103	NONE
Wafer	SCT2004WR-2xxB0BE102 SCT2004WV-2xxB0BE102 SCT2004WVS-2xxE1BE102	NONE

3. Disposal of Material and surface

Specification	Materials	Disposal of Surface
Terminal	Phosphor Bronze	Tin Plated: Over 70 μ " .Nickel: Over 30 μ " .
Housing	PA66	UL 94V-0
Wafer	Base	UL 94V-0
	PIN	Over Tin 70 μ " /Over 30 μ " Nickel

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

4. Ratings and applicable wires

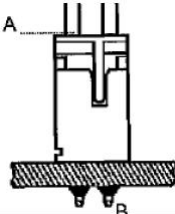
Item	Standard	
Rated Voltage (Max.)	250V	[AC/DC]
Rated Current (Max.)	3.0A	
Ambient temperature Range	-25 $^{\circ}$ C~+85 $^{\circ}$ C	
Applicable wire insulation O.D	AWG 22#~28# Insulation O.D. 1.50mm(Max.)	

*Including terminal temperature rise.

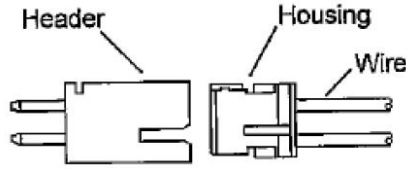
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5. PERFORMANCE

5-1. Electrical Performance.

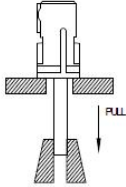
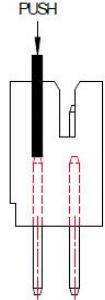
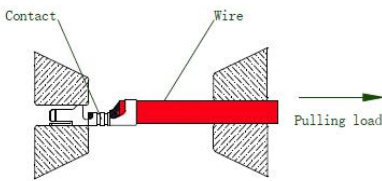
Item		Test Condition	Requirement
5-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A).	Initial: 10 milliohms Max. After Test: 20 milliohms Max.
			
5-1-2	Insulation Resistance	Mate connectors, apply 500V DC between adjacent terminal or ground. (Based upon EIA-364-21B/MIL-STD-202 Method 302 Cond.B)	1000 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.	10 milliohms Max.

5-1. Electrical Performance

Item		Test Condition	Requirement
5-2-1	Insertion & Retention Force	Insert and withdraw Connectors at the speed rate of 25.4±3mm/minute.	Refer to paragraph 6
			

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5-2. Mechanical Performance.

Item	Test Condition	Requirement										
5-2-2 Terminal /Housing Retention Force	Apply axial pull out force at the rate of 25.4±3mm/minute terminal assembled in the housing. 	14.7N {1.5kgf} Min.										
5-2-3 Terminal Insertion Force	Insert the crimped terminal into the housing.	9.8N {1.0kgf} Max.										
5-2-4 Pin Retention Force	Apply axial push force at the speed of 25.4±3mm/minute. 	9.8N {1.00kgf} Min.										
5-2-5 Tensile strength (Crimped connections)	Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part).	<table border="1"> <tr> <td>AWG#</td> <td>#22</td> <td>#24</td> <td>#26</td> <td>#26</td> </tr> <tr> <td>Spec. kgf. Min.</td> <td>4.0</td> <td>3.0</td> <td>2.0</td> <td>1.0</td> </tr> </table>	AWG#	#22	#24	#26	#26	Spec. kgf. Min.	4.0	3.0	2.0	1.0
	AWG#	#22	#24	#26	#26							
Spec. kgf. Min.	4.0	3.0	2.0	1.0								
	Note> As for unspecified wire sizes in this specification define values with clients											

Item	Test Condition	Requirement		
5-3-1 Repeated Insertion/ Withdrawal	When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute.	<table border="1"> <tr> <td>Contact Resistance</td> <td>20 milliohms Max.</td> </tr> </table>	Contact Resistance	20 milliohms Max.
Contact Resistance	20 milliohms Max.			

5-3. Environmental Performance and Others.



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Item		Test Condition	Requirement	
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	20 milliohms Max.
			Discontinuity	1 micro-second Max.
5-3-4	Shock	490m/s ² {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	20 milliohms Max.
			Discontinuity	1 micro-second Max.
5-3-5	Heat Resistance	85±2°C,96 hours. (Based upon MIL-STD-202 Method 108A Cond.A)	Appearance	No Damage
			Contact Resistanc	20milliohms Max.
5-3-6	Cold Resistance	-25±5°C,96 hours. (Based upon EIA-364-105)	Appearance	No Damage
			Contact Resistanc	20milliohms Max.
5-3-7	Humidity	Temperature: 40±2°C Relative Humidity: 90~95% Duration: 96 hours (Based upon EIA-364-31A/MIL-STD-202 Method 103B Cond.B)	Appearance	No Damage
			Contact Resistance	20milliohms Max.
			Dielectric Strength	Must meet 5-1-3
			Insulation Resistance	500Megohms Min.
5-3-8	Temperature Cycling	5 cycles of: a) -55°C 30 minutes. b) +85°C 30 minutes. (Based upon EIA-364-32B)	Appearance	No Damage
			Contact Resistance	20milliohms Max.



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Item		Test Condition	Requirement	
5-3-9	Salt Spray	24±1 hours exposure to a salt spray from the 5±1% solution at 35±2°C. (Based upon EIA-364-26A/MIL-STD-202 Method 101D Cond.B).	Appearance	No Damage
			Contact Resistance	20milliohms Max.
5-3-10	Solder-ability	Soldering Time: 5±0.5second. Solder Temperature: 245±5°C. (Based upon EIA-364-52)	Solder Wetting	95% of immersed area must show no voids, pin holes.
5-3-11	Solder-Resistance	Soldering time:5~10 sec solder. Temperature:250+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 th Withdrawal (kgf Min.)	No. of CKT	First Insertion (kgf Max.)	30 th Withdrawal (kgf Min.)
Single	1.0	0.05	2*11	8.5	1.5
2*02	4.0	0.4	2*12	9.0	1.6
2*03	4.5	0.6	2*13	9.5	1.6
2*04	5.0	0.8	2*14	10.0	1.7
2*05	5.5	1.0	2*15	10.5	1.7
2*06	6.0	1.2	2*16	11.0	1.8
2*07	6.5	1.2	2*17	11.5	1.8
2*08	7.0	1.4	2*18	12.0	1.9
2*09	7.5	1.4	2*19	12.5	1.9
2*10	8.0	1.5	2*20	13.0	2.0

Note:Insertion and Withdrawal for 30Cycles