Product Specification :	ISSUED BY:	Engineering Dept
Subject : 2.54mm Pitch SCT2541 Series Connector Specification	Date Issued	2014/03/09
	Date Revised	2014/03/24

This specification is referred to the 2.54mm series wire to board connector

INDEX

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1. Scope

This Specification Covers the 2.54mm Pitch SCT2541 Series Connector Specification.

2. Spec and Part number

Specification	Production No.	Picture of Product
Terminal	SCT2541FTPS109 SCT2541MTPS134	NONE
Housing	SCT2541FH-04B3CBK134 SCT2541MH-xxBBE109	NONE
Wafer	SCT2541WR-xxC0BE108 SCT2541WV-xxC0BE108	NONE

3. Disposal of Material and surface

Specification		Materials	Disposal of Surface
Terminal		Phosphor Bronze	Tin Plated:Over 70μ″ . Nickel: Over 30μ″ .
Housing		PA66	UL 94V-0
Wafer	Base	PA66	UL 94V-0
	PIN	Brass	Over Tin 70μ″ Plated; Over 30μ″ 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℃~+85℃	
Applicable wire insulation O.D	AWG 22#~28# Insulation O.D. 1.90mm(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:
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.	5 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
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.	17.79N {1.8kgf} Min.
5-2-3	Terminal Insertion Force	Insert the crimped terminal into the housing.	14.7N {1.5kgf} Max.
5-2-4	Pin Retention Force	Apply axial push force at the speed of 25.4±3mm/minute.	14.7N {1.5kgf} Min.

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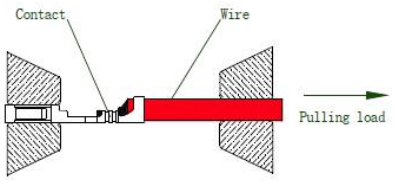
5-2. Mechanical Performance.

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#	#22	#24	#26	#28
			Spec. kgf. Min.	5.0	3.0	2.0	1.0
			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 50 cycles repeatedly by the rate of 10 cycles per minute.	Contact Resistance	20 milliohms Max.
5-3-2	Temperature Rise	Carrying rated current load. (UL 1977)	Temperature rise	30℃ 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℃,96 hours. (Based upon MIL-STD-202 Method 108A Cond.A)	Appearance	No Damage
			Contact Resistance	20milliohms Max.

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Item		Test Condition	Requirement	
5-3-6	Cold Resistance	-25±5℃,96 hours. (Based upon EIA-364-105)	Appearance	No Damage
			Contact Resistanc	20milliohms 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	20milliohms Max.
			Dielectric Strength	Must meet 5-1-3
			Insulation Resistance	500Megohms 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	20milliohms 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	20milliohms Max.
5-3-10	Solder-ability	Soldering Time:3±0.5second. Solder Temperature: 245±5℃. (Based upon EIA-364-52)	Solder Wetting	95% of immersed area must show no voids, pin holes.
5-3-11	Solder-Resistance	Soldering time:3~5 sec solder. Temperature:250+5/-5℃. (Based upon EIA-364-56A)	Appearance	No Damage

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6. INSERTION/WITHDRAWAL FORCE <Connector mating force>

No. of CKT	First Insertion (kgf Max.)	30th Withdrawal (kgf Min.)	No. of CKT	First Insertion (kgf Max.)	30th Withdrawal (kgf Min.)
02	0.50	0.10	09	2.00	0.45
03	0.80	0.15	10	2.20	0.50
04	1.00	0.20	11	2.40	0.55
05	1.20	0.25	12	2.60	0.60
06	1.40	0.30	13	2.80	0.65
07	1.60	0.35	14	3.00	0.70
08	1.80	0.40	15	3.20	0.75

Note:Insertion and Withdrawal for 30Cycles