Product Specification :	ISSUED BY: Engineering Dept	
Subject : 1.25mm Pitch SCT1253 Series Connector Specification	Date Issued	2012/08/28
	Date Revised	2013/11/26

This specification is referred to the 1.25mm series wire to board connector

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1. Scope

This Specification Covers the 1.25mm Pitch SCT1253 Series Connector Specification.

2. Spec and Part number

Specification	Production No.	Picture of Product
Terminal	SCT1253T	NONE
Housing	SCT1253H-XXP SCT1253HA-XXP	NONE
Wafer	SCT1253WR-S-XXP SCT1253WVA-S-XXP SCT1253WR-SF-XXP SCT1253WRA-S-XXP	NONE

3. Disposal of Material and surface

Specification		Materials	Disposal of Surface
Terminal		Phosphor Bronze	Tin:Over 70μ″ ,Nickel: Over 30μ″ .
Housing		PA66	UL 94V-0
Wafer	Base	High Temperature Plastic/PA66	UL 94V-0
	PIN	Brass	Over Tin 70μ″ / Over 30μ″ Nickel
	Solder tab	Brass	Over Tin 70μ″ / Over 30μ″ Nickel

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

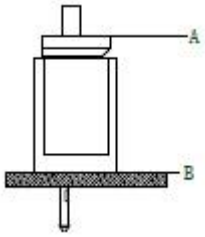
4. Ratings and applicable wires

Item	Standard	
Rated Voltage (Max.)	150V	[AC/DC]
Rated Current (Max.)	1.0A	
Ambient temperature Range	-35℃~+85℃	
Applicable wire insulation O.D	AWG 26#~32# Insulation O.D. 1.00mm(Max.)	

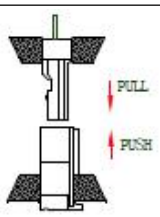
*Including terminal temperature rise.

5. PERFORMANCE

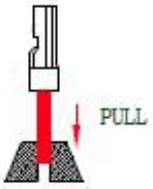
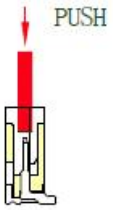
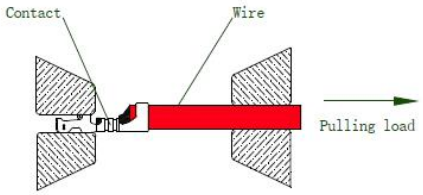
5-1. Electrical Performance.

Item		Test Condition	Requirement
5-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A). 	Initial: 30 milliohms Max. After Test: 40 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)	500 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

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. 	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	Pin Retention Force	Apply axial push force at the speed of 25.4±3mm/minute. 	4.9N {0.5kgf} 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). 	AWG# / Spec. kgf. Min.: #26: 1.5; #28: 1.0; #30: 0.5; #32: 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 50 cycles repeatedly by the rate of 10 cycles per minute.	Contact Resistance	40 milliohms Max.

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Item		**Test Condition**	**Requirement**	
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	40 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	40 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 Resistanc	40milliohms Max.
5-3-6	Cold Resistance	-25±5℃,96 hours. (Based upon EIA-364-105)	Appearance	No Damage
			Contact Resistanc	40milliohms 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	40milliohms Max.
			Dielectric Strength	Must meet 5-1-3
			Insulation Resistance	100Megohms 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	40milliohms 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℃. (Based upon EIA-364-26A/MIL-STD-202 Method 101D Cond.B).	Appearance	No Damage
			Contact Resistance	40milliohms Max.
5-3-10	Solder-ability	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.
5-3-11	Solder-Resistance	Soldering time:5~10 sec solder. Temperature:250+5/-5℃. (Based upon EIA-364-56A)	Appearance	No Damage

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.)
2	1.60	0.10	13	4.90	0.65
3	1.90	0.15	14	5.20	0.70
4	2.20	0.20	15	5.50	0.75
5	2.50	0.25	16	5.80	0.80
6	2.80	0.30	17	6.10	0.85
7	3.10	0.35	18	6.40	0.90
8	3.40	0.40	19	6.70	0.95
9	3.70	0.45	20	7.00	1.00
10	4.00	0.50	25	8.50	1.25
11	4.30	0.55	30	10.00	1.50
12	4.60	0.60			

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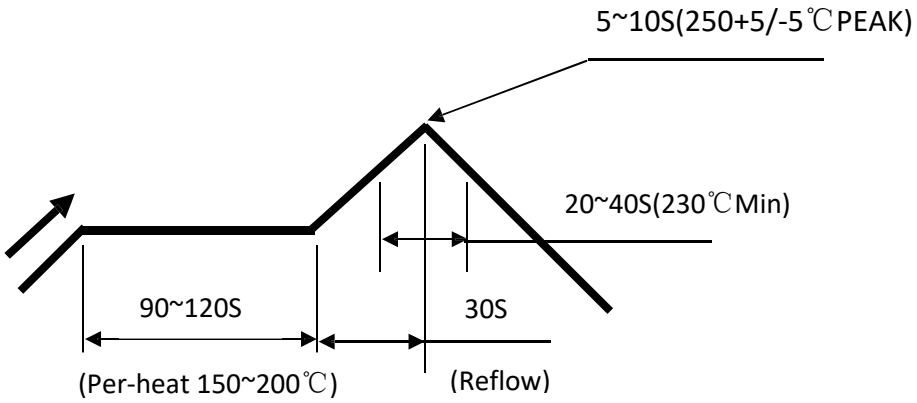
7. SMT SMT INFRARED REFLOW CONDITION



TEMPERATURE CONDITION GRAPH/ (TEMPERATURE ON BOARD PATTERNSIDE)

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.
Note:Insertion and Withdrawal for 30Cycles