Product Specification :	ISSUED BY:	Engineering Dept
Subject : 3.96mm Pitch SCT3960 Series Connector Specification	Date Issued	2012/08/09
	Date Revised	2013/07/29

This specification is referred to the 3.96mm series wire to board connector

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1. Scope

This Specification Covers the 3.96mm Pitch SCT3960 Series Connector Specification.

2. Spec and Part number

Specification	Production No.	Picture of Product
Terminal	SCT3960TBS112	NONE
Housing	SCT3960H-xxCNA119 SCT3960HA-xxCNA119	NONE
Wafer	SC0T3960WR-xxC0NA102 SC0T3960WV-xxC0NA102	NONE

3. Disposal of Material and surface

Specification		Materials	Disposal of Surface
Terminal		Phosphor Bronze	Tin Plated:Over 70μ″ .Nickel: Over 30μ″ .
Housing		PA66	UL94V-2
Wafer	Base	PA66	UL94V-2
	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.)	7A	
Ambient temperature Range	-25℃~+85℃	
Applicable wire insulation O.D	AWG 18#~24# Insulation O.D. 2.80mm(Max.)	

*Including terminal temperature rise.

5. PERFORMANCE

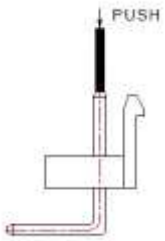
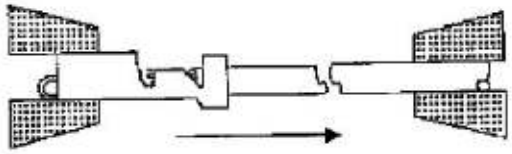
5-1. Electrical Performance.

Item		Test Condition	Requirement
5-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A).	Initial: 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.	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. 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.	29.4N {3.0kgf} Min.
5-2-3	Terminal Insertion Force	Insert the crimped terminal into the housing.	19.6N {2.0kgf} Max.
5-2-4	Pin Retention Force	Apply axial push force at the speed of 25.4±3mm/minute. 	29.4N {3.0kgf} 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# #18 #20 #22 #24 Spec. kgf. Min. 9.0 6.0 4.0 3.0 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 30 cycles repeatedly by the rate of 10 cycles per minute.	Contact Resistance	20 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	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 Resistanc	20milliohms Max.
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.

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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	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:255+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	4.40	0.50	8	11.60	1.70
3	5.60	0.70	9	12.80	1.90
4	6.80	0.90	10	14.00	2.10
5	8.00	1.10	11	15.20	2.30
6	9.20	1.30	12	16.40	2.50
7	10.40	1.50			

Note:Insertion and Withdrawal for 30Cycles