SPECIFICATION

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SPEC. NO.: PS-50463-XXXXX-XXX **REVISION:** C

PRODUCT NAME: 0.4 WTB COAX. REPT/PLUG CONN.

PRODUCT NO: 50463,50464 SERIES

PREPARED:	CHECKED:	APPROVED:
YIJIAHAO	XUZHIYONG	XUZHIYONG
DATE: 2024/01/15	DATE: 2024/01/15	DATE: 2024/01/15

1 Revision History

Rev.	ECN #	Revision Description	Prepared	Date
1	ECN-1102068	PROPOSAL	ALEX	2011/02/18
2	ECN-1106201	ADD AWG#36~42	ALEX	2011/05/17
O	ECN-1107032	REV-O	ALEX	2011/07/02
O1	ECN-1112235	ADD 14PIN	ALEX	2011/12/13
A	ECN-1202139	REV-A	ALEX	2012/02/13
B	ECN-1401240	ADD WORKING VOLTAGE	XUFEI	2014/01/14
C	ECN-015198	ADD 12PIN&32PIN Mating / Unmating Forces	YIJIAHAO	2024/01/15

2 SCOPE

This specification covers performance, tests and quality requirements for 0.4 WTB COAX CONN.
REPT CONN. P/N : 50463
PLUG CONN. P/N : 50464

3 APPLICABLE DOCUMENTS

EIA-364: ELECTRONICS INDUSTRIES ASSOCIATION

4 REQUIREMENTS

4.1 Design and Construction

4.1.1 Product shall be of design, construction and physical dimensions specified on applicable product drawing.
4.1.2 All materials conform to R.o.H.S. and the standard depends on TQ-WI-140101.

4.2 Materials and Finish

4.2.1 Contact: High performance copper alloy (Phosphor Bronze)
Finish: (a) Contact Area: Refer to the drawing.
(b) Under plate: Refer to the drawing.
(c) Solder area: Refer to the drawing.
4.2.2 Housing: Thermoplastic or Thermoplastic High Temp., UL94V-0
4.2.3 Fitting Nail : Copper Alloy, Finish: Refer to the drawing.

4.3 Ratings

4.3.1 Working voltage less than 36 volts (per pin)
4.3.2 Voltage: 100 Volts AC (per pin)
4.3.3 Current: Coaxial cables AWG#36~42, 0.24 Amperes /pin

4.3.4 Operating Temperature : -40℃ to +85℃

5 Performance

5.1. Test Requirements and Procedures Summary

Item	Requirement	Standard
Examination of Product	Product shall meet requirements of applicable product drawing and specification.	Visual, dimensional and functional per applicable quality inspection plan.
ELECTRICAL		
Item	**Requirement**	**Standard**
Low Level Contact Resistance	60 m Ω Max.(initial)per contact △R 40 m Ω Max.	Mate connectors, measure by dry circuit, 20mV Max., 100mA Max. (EIA-364-23)
Insulation Resistance	Initial :1000 M Ω Min. Finish:500 M Ω Min.	Unmated connectors, apply 250 V DC between adjacent terminals. (EIA-364-21)
Dielectric Withstanding Voltage	No discharge, flashover or breakdown. Current leakage: 1 mA max.	250 VAC Min. at sea level for 1 minute. Test between adjacent contacts of unmated connectors. (EIA-364-20)
Temperature Rise	30℃ Max. Change allowed	Mate connector: measure the temperature rise at rated current until temperature stable. The ambient condition is still air at 25℃ (EIA-364-70,METHOD1,CONDITION1)

MECHANICAL		
Item	**Requirement**	**Standard**
Durability	30 cycles.	The sample should be mounted in the tester and fully mated and unmated the number of cycles specified at the rate of 25.4 ± 3mm/min. (EIA-364-09)
Mating / Unmating Forces	See item 8	Operation Speed： 25.4 ± 3 mm/minute.. Measure the force required to mate/umate connector. (EIA-364-13)
Contact Retention Force (REPT SIDE)	30gf Min.	Operation Speed： 25.4 ± 3 mm/minute. Measure the contact retention force with tester.

Vibration	1 μs Max.	The electrical load condition shall be 100 mA maximum for all contacts. Subject to a simple harmonic motion having amplitude of 0.76mm (1.52mm maximum total excursion) in frequency between the limits of 10 and 55 Hz. The entire frequency range, from 10 to 55 Hz and return to 10 Hz, shall be traversed in approximately 1 minute. This motion shall be applied for 2 hours in each of three mutually perpendicular directions. (EIA-364-28 Condition I)
Shock (Mechanical)	1 μs Max.	Subject mated connectors to 50 G's (peak value) half-sine shock pulses of 11 milliseconds duration. Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks). The electrical load condition shall be 100mA maximum for all contacts. (EIA-364-27, test condition A)

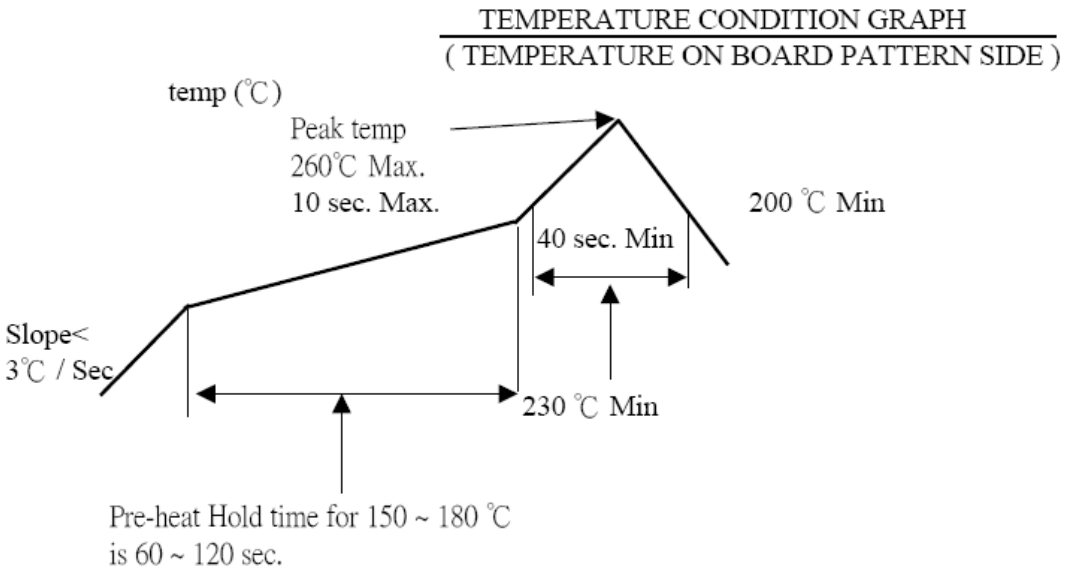
ENVIRONMENTAL		
Item	**Requirement**	**Standard**
Thermal Shock	See Product Qualification and Test Sequence Group 4	Mate module and subject to follow condition for 5 cycles. 1 cycles: -55 +0/-3 ℃, 30 minutes +85 +3/-0 ℃, 30 minutes (EIA-364-32, test condition I)
Humidity	See Product Qualification and Test Sequence Group 4	Mated Connector 40℃, 90~95% RH, 96 hours. (EIA-364-31,Condition A, Method II)
Temperature Life	See Product Qualification and Test Sequence Group 5	Subject mated connectors to temperature life at 85℃ for 96 hours. (EIA-364-17, Test condition A)

Salt Spray (Only For Gold Plating)	See Product Qualification and Test Sequence Group 6	Subject mated/unmated connectors to 5% salt-solution concentration, 35℃ 48 hours (EIA-364-26)
Resistance to Reflow Soldering Heat (REPT SIDE)	See Product Qualification and Test Sequence Group 1 **(Lead Free)**	Pre Heat：150℃~180℃, 60~120sec. Heat：230℃ Min., 40sec Min. Peak Temp.：260℃Max, 10sec Max.
Solder ability	Tin plating: Solder able area shall have minimum of 95% solder coverage. Gold plating: Solder able area shall have minimum of 75% solder coverage	And then into solder bath, Temperature at 245 ±5℃, for 4-5 sec. (EIA-364-52)
Hand Soldering Temperature Resistance	Appearance: No damage	T≧ 350℃, 3sec at least.

Note. Flowing Mixed Gas shell be conduct by customer request.

6 INFRARED REFLOW CONDITION

6.1 Lead-Free Process



7 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test or Examination	Test Group										
	1	2	3	4	5	6	7	8	9		
	Test Sequence										
Examination of Product	1、4	1、6	1、6	1、8	1、7	1、5	1	1	1		
Low Level Contact Resistance		3、7	3、7	3、9	3、8	3、6					
Insulation Resistance				4、10	4、9						
Dielectric Withstanding Voltage				5、11	5、10						
Temperature Rise	3										
Mating / Unmating Forces		4、8									
Durability		5									
Contact Retention Force(Rept Side)							2				
Vibration			4								
Shock (Mechanical)			5								
Thermal Shock				6							
Humidity				7							
Temperature Life					6						
Salt Spray(Only For Gold Plating)						4					
Resistance to Soldering Heat	2	2	2	2	2	2					
Solder ability								2			
Hand Soldering Temperature Resistance									2		
Sample Size	2	4	4	4	4	4	4	2	4		

8 Mating / Unmating Force

NO. OF Ckt.	Initial/ After 30th Cycle	
	Mating Force (Max.)	Unmating Force (Min.)
10	29N	1.2N
12	30N	1.33N
14	30N	1.45N
20	31N	1.76N
30	33N	2.65N
32	34N	2.78N
40	35N	3.5N