SPECIFICATION

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SPEC. NO.: PS-51363-XXXXX-XXX **REVISION:** O

PRODUCT NAME: 0.5 WTB LVDS CONN.

PRODUCT NO: 51363/ 51364 Series

PREPARED:	CHECKED:	APPROVED:
CHENYA	XIUJIN	BRAVE
DATE: 2017.09.06	DATE: 2017.09.06	DATE: 2017.09.06

1 Revision History

Rev.	ECN #	Revision Description	Prepared	Date
O	ECN-XXXXXXX	NEW SPEC RELEASE(FOR APD1060253)	CHENYA	2017.09.20

2 SCOPE

This specification covers performance, tests and quality requirements for 0.5 WTB LVDS CONN.
Female Board P/N : 51363
Male Cable P/N : 51364
Cable: Coaxial cable AWG#36
AWG#40
AWG#42

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 RoHS. And the standard depends on TQ-W1-140101

4.2 Materials and Finish

4.2.1 Contact: High performance copper alloy (Phosphor Bronze)
Finish: (a) Contact: Gold Plated
(b) Under plate: Nickel-plated all over

4.2.2 Housing: Thermoplastic or Thermoplastic High Temp., UL94V-0
4.2.3 Upper Shell: Stainless steel, Nickel-plated or Tin-Plated
4.2.4 Lower Shell: Stainless steel, Nickel-plated

4.3 Ratings

4.3.1 Working voltage less than 36 volts(per pin)
4.3.2 Voltage: 50 Volts AC (r.m.s)
4.3.3 Current: 0.35~0.2 Amperes /pin (depending on the diameter of cable conductor)
Coaxial cables AWG#36: 0.30A AC, DC PER CONTACT
AWG#40: 0.25A AC, DC PER CONTACT
AWG#42: 0.20A AC, DC PER CONTACT

4.3.4 Operating Temperature : -55℃ 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	Terminal:80 m Ω Max.(initial) per contact 100 m Ω Max.(finish) Ground shell:300 m Ω Max(initial& finish)	Mate connectors, measure by dry circuit, 20mV Max., 100mA Max. (EIA-364-23C)
Insulation Resistance	100 M Ω Min.	Unmated connectors, apply 250 V DC between adjacent terminals. (EIA-364-21D)
Dielectric Withstanding Voltage	No discharge, flashover or breakdown. Current leakage: 2 mA max.	100 VAC Min. at sea level for 1 minute. Test between adjacent contacts of unmated connectors. (EIA-364-20D)
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-364-70B,METHOD1,CONDITION1)

Note. High Frequency Test shell be conduct by customer request.

MECHANICAL		
Mating / Unmating Forces	See item 6	Operation Speed： 25.4 ± 3 mm/minute.. Measure the force required to mate/unmate connector. (EIA-364-13D)
Terminal Retention Force	Terminal : 1.96 N Min.	Operation Speed： 25.4 ± 3 mm/minute. Measure the contact retention force with tester. (EIA-364-29C)
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-364-09C)
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-364-28E 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-364-27B, test condition A)

ENVIRONMENTAL		
Item	**Requirement**	**Standard**
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)
Thermal Shock	See Product Qualification and Test Sequence Group 6	Mate module and subject to follow condition for 10 cycles. 1 cycles: -55 +0/-3 ℃, 30 minutes +85 +3/-0℃, 30 minutes Transform 5 minutes (EIA-364-32E, test condition A)
Humidity	See Product Qualification and Test Sequence Group 6	Mated Connector 25℃~65℃, 90~95% RH, 96 hours (EIA-364-31C,Condition A, Method II)
Salt Spray	See Product Qualification and Test Sequence Group 7	Subject mated/unmated connectors to 5% salt-solution concentration, 35℃(I) Gold plating ＜3u" for 8 hours. (II) 3u"≤Gold plating＜5u" for 48 hours (III) Gold plating≥5u" for 96 hours (EIA-364-26,Test condition B)
Solder ability	Solder able area shall have minimum of 95% solder coverage.	Subject the test area of contacts into the flux for 5-10 sec. And then into solder bath, Temperature at 245 ±5℃, for 4-5 sec. (EIA-364-52)
Resistance to Reflow Soldering Heat	See Product Qualification and Test Sequence Group 9 (**Lead Free)** 2 Times	Pre Heat：150~180℃,60~90sec. Heat：230℃ Min., 40sec Min. Peak Temp.：260℃Max, 10sec Max.
Hand Soldering Temperature Resistance	Appearance: No damage	T≧350℃, 3sec at least.
Mixed Flowing Gas	Upon completion of the test, there Shall be no physical damage to the samples See Product Qualification and Test Sequence Group11	Mated Connector 30±1℃,70±2% R.H.5Days CI2:10±3ppb NO2:200±50ppb H2S:10±5ppb SO2:100±20ppb (EIA-364-65B,Class II A)

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

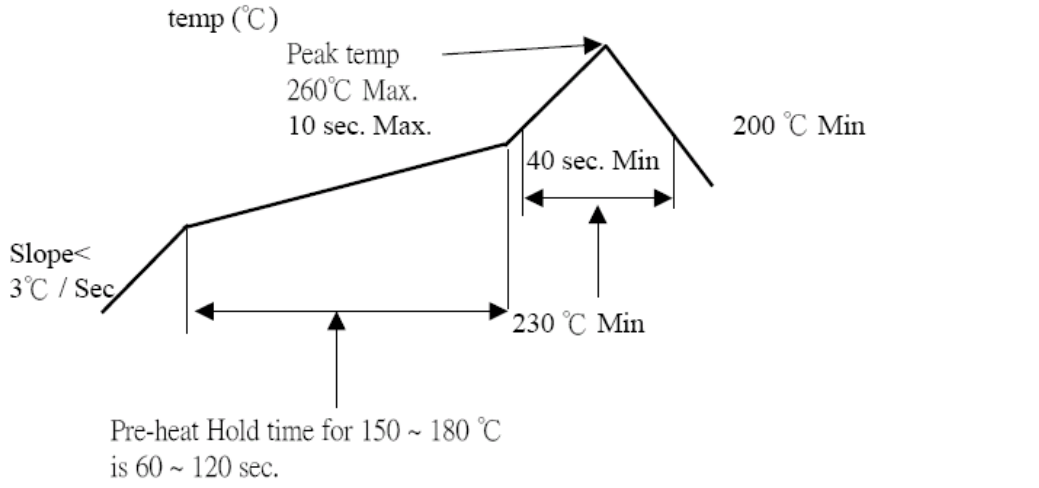
6 Insertion / Extraction Force

NO. OF Ckt.	Initial		After 30th Cycle	
	Insertion Force (Max.)	Extraction Force (Min.)	Insertion Force (Max.)	Extraction Force (Min)
30	40N / 4.08 Kgf	3N / 0.306 Kgf	40N / 4.08 Kgf	3N / 0.306 Kgf

7 INFRARED REFLOW CONDITION

Lead-free Process

TEMPERATURE CONDITION GRAPH
(TEMPERATURE ON BOARD PATTERN SIDE)



8.PRODUCT QUALIFICATION AND TEST SEQUENCE

Test or Examination	Test Group											
	1	2	3	4	5	6	7	8	9	10	11	…
	Test Sequence											
Examination of Product	1,3		1,5	1,5	1,6	1,7	1,4	1,3	1,3	1,3	1,5	
Low Level Contact Resistance			2,7	2,6	2,7	2,8	2,5				2,4	
Insulation Resistance					3,8	3,9						
Dielectric Withstanding Voltage					4,9	4,10						
Temperature rise	2											
Mating / Unmating Forces			3,6									
Contact Retention Force Shell Retention Force		1										
Durability			4									
Vibration				3								
Shock (Mechanical)				4								
Temperature life					5							
Thermal Shock						5						
Humidity						6						
Salt Spray							3					
Solder ability								2				
Hand Soldering Temperature Resistance									2			
Resistance to Soldering Heat										2		
Mixed Flowing Gas											3	
Sample Size	2	4	4	4	4	4	2	4	4	4	4	