SPECIFICATION

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SPEC. NO.: PS-50410-XXXXX-XXX **REVISION:** C

PRODUCT NAME: 0.8 mm PITCH WTB IDC CONNECTOR

PRODUCT NO: 50410.50445 SERIES

PREPARED:	CHECKED:	APPROVED:
Xufei	**Jerry**	**JASON**
DATE: **2014/01/10**	DATE: **2014/01/10**	DATE: **2014/01/10**

1 REVISION HISTORY

Rev.	ECN #	Revision Description	Prepared	Date
1	ECN- 0910236	NEW SPEC	JASON	2009.11.02
2	ECN-0912027	UPDATE CONTACT V.S WIRE RETENTION FORCE	JASON	2009.12.04
O	ECN-1002082	RELEASED	JASON	2010.02.08
A	ECN-1008163	ADD 50445 SERIES	JASON	2010.08.24
B	ECN-1111447	AMEND SPEC	GAVIN	2011.11.28
C	ECN-1401180	ADD Working voltage	XUFEI	2014.01.10

2 SCOPE

This specification covers performance, tests and quality requirements for 0.8 mm pitch IDC connector.

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.
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: 50 Volts AC (per pin)
4.3.3 Current:
AWG#34: 0.5 Amperes (per 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	30 m Ω Max.(initial)per contact 40 m Ω Max. after test.	Mate connectors, measure by dry circuit, 20mV Max., 100mA Max. (EIA-364-23)
Insulation Resistance	100 M Ω Min.	Unmated connectors, apply 500 V DC between adjacent terminals. (EIA-364-21)
Dielectric Withstanding Voltage	No Breakdown.	Mate connectors and apply 500 V AC/rms for 1 minute between adjacent terminal or ground (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.
Mating / Unmating Forces	Please see Item 8	Operation Speed： 25.4 ± 3 mm/minute.. Measure the force required to mate/unmate connector. (EIA-364-13)
Terminal / Housing Retention Force (Cable Side)	0.15 Kgf MIN.	Apply axial pull out force at the speed rate of 25.4 ± 3 mm/minute. On the terminal assembled in the housing.
Wire Pull Out Force	Refer to item 9	Operation Speed： 25.4 ± 3 mm/minute. Fix the crimped terminal, apply axial pull out force on the wire.

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℃ (I) Gold flash for 8 hours (II) Gold plating 5 u" for 96 hours. (EIA-364-26)

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

6 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、7	1、6	1、4					
Low Level Contact Resistance		1、5	1、4	2、10	2、9	2、5					
Insulation Resistance				3、9	3、8						
Dielectric Withstanding Voltage				4、8	4、7						
Temperature Rise	1										
Mating / Unmating Force		2、4									
Durability		3									
Vibration			2								
Shock (Mechanical)			3								
Thermal Shock				5							
Humidity				6							
Temperature Life					5						
Salt Spray(Only For Gold Plating)						3					
Wire Pull Out Force							1				
Terminal / Housing Retention Force (Cable Side)								1			
Sample Size	2	4	4	4	4	4	4	4	4	4	4

7 MATING / UNMATING FORCE

NO. of CKT.	Initial		After 30th Cycle
	Mating Force (Max.)	Unmating Force (Min.)	Unmating Force (Min)
2	1.5 KG	0.15 KG	0.10KG
3			
4			
5	2.0KG	0.25KG	0.15KG
6			
7			
8			
9			
10			
11	3.0KG	0.35KG	0.25KG
12			
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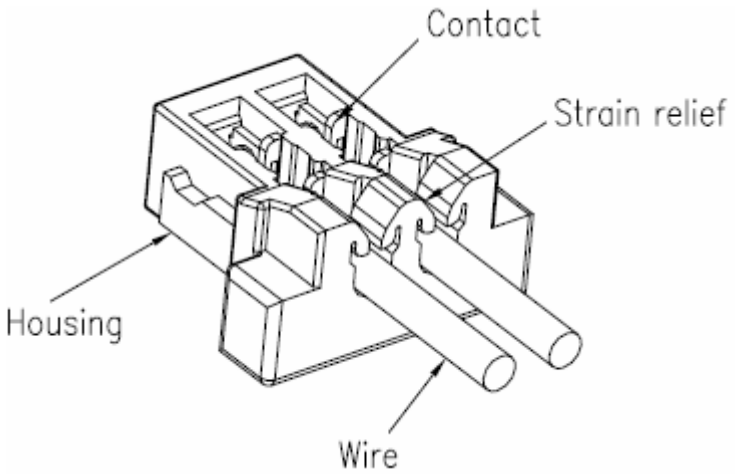
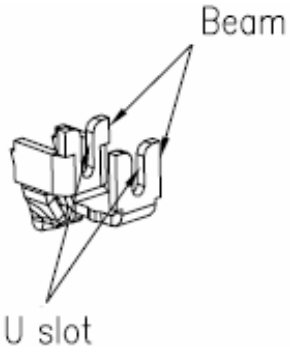
8 APPLICABLE SPECIFICATIONS

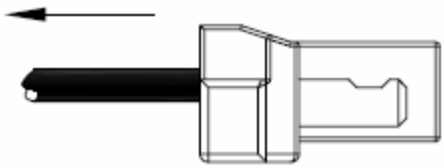




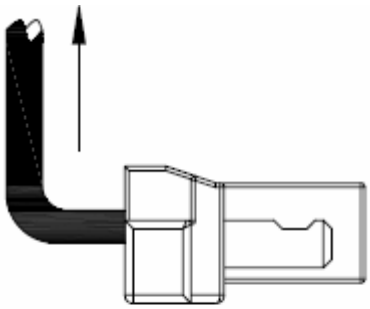
9 CONTACT V.S WIRE RETENTION FORCE

Wire Size	Insulation OD	Material of insulation	Parallel	Perpendicular
AWG #34/19C	Φ0.38±0.02mm	PVC	6N Min.	3N Min.
		Halogen free	6N Min.	1.5N Min.
AWG #34/7C	Φ0.32±0.02mm	PVC	3N Min.	1.2N Min.
		Halogen free	3N Min.	1.2N Min.
AWG #34/19C	Φ0.33±0.02mm	PVC	3N Min.	1.2N Min.
		Halogen free	3N Min.	1.2N Min.

Note：It is necessary to use the UV glue for the application of the wire retention force increasing.



Parallel direction



Perpendicular direction