SPECIFICATION FOR APPROVAL

DESCRIPTION: Pitch 1.2mm Wire To Board Connector, R/A, SMT Type

CUSTOMER PROD.NO/DWG.NO:

E&T PROD.NO:

4286K-XXXX-XXX

APPROVAL SHEET NO:

E&T DWG. NO./DOCUMENT: 4286K -XXXX-XXX

REV: A5

PLEASE RETURN TO US ONE COPY OF"SPECIFICATION FOR APPROVAL"WITH YOUR APPROVED SIGNATURES.

APPROVED SIGNATURES						



ENTERY INDUSTRIAL CO., LTD. E&T ELECTRONICS (DONG GUAN) CO., LTD. E&T ELECTRONICS (SU ZHOU) CO., LTD.

PRODUCT SPECIFICATION

1. SCOPE :

This specification covers the 1.2 WTB Connector series.

Including part number

Part Number	Title
4286K-XXXX-XXX	1.2 Wire To Board R/A, SMT

2. RATINGS :

Item	Stand	dard			
Rated Current	1.0A (AWG#30)	A C(max)/DC			
Rated Voltage	180V	AC(IIIIS)/DC			
Operating and Non-operating	40 ⁰ C - 1105 ⁰ C*				
Temperature Range	-40 C ~ +105 C				
Operating and Non-operating	40%~80%				
Humidity Range					
Storage Temperature Range	-10 ⁰ C ~	+50 ⁰ C*			
Storage Humidity Range	40%~70%				

*Includes temperature rise caused by current flow.

REV	Revisions	Date	Series:	1 7 Ditah	Wire To Board	Connector
A5	DCN120812	2012/8/28		1.2 I IICII	whe to Doard	Connector
Docun	nent No.		Created/	Revised :	Jyno Ju	n-10-2011
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	+2001x-7/7/7/		Appr	oved :	NON I	//////
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ENTERY INDUSTRIAL CO., LTD. PRODUCT SPECIFICATION

3.PERFORMANCE :

3-1 Electrical Performance

	Item	Test Condition	Requirement
3-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV MAX . 10mA EIA-364-06C	20mQ (Max)
3-1-2	Insulation Resistance	Apply 500V ±10% DC between adjacent terminals, or terminal and ground. EIA-364-21D	100MΩ(Min)
3-1-3	Withstanding Voltage Test	Apply 500V AC (rms) for 1 minute between adjacent terminals, or terminal and ground. EIA-364-20D	No Breakdown

3-2 Mechanical Performance

	Item	Test Condition	Requirement
3-2-1	Mating and Un mating Force Test	Mating and un mating connectors at the speed rate of 25±3mm/minute. EIA-364-13D	See-4-1
3-2-2	Pin Retention Force	Apply axial pull out force at the speed rate of 25±3 mm/minute on the terminal assembled in the housing. EIA-364-29C	0.3kgf (Min)
3-2-3	Fitting Nail/ Housing Retention Force	Apply axial pull out force at the speed rate of 25±3 mm/minute on the fitting nail assembled in the housing. EIA-364-29C	0.2kgf (Min)
		When mated up to 30 cycles repeatedly by the rate of 10 cycles/minute.	Withstanding Voltage : Meet 3-1-3
3-2-4	Durability	EIA-304-09C	Insulation esistance : $\geq 10 M \Omega$
			Contact Resistance $\leq 40 \text{m}\Omega$

PRODUCT SPECIFICATION

3-3 Environmental Performance and Others

	Item	Test Condition	Requirement		
3-3-1	Vibration	Mate connectors and subject to the following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axes, passing DC 1mA during the test. Amplitude : 1.52mm P-P Frequency : 10.55, 10 Hz	Appearance No Damage Contact Resistance $\leq 40 \text{m} \Omega$		
		Shall be traversed in 1 minute. EIA-364-28E	Discontinuity 1µsec MAX		
3-3-2	Temperature Life Test	Mate connectors and expose to 85 ± 2 °C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours.	Appearance No Damage		
552	(Heat Resistance)	after which the specified measurements shall be performed. EIA-364-17B	Contact Resistance $\leq 40 \text{m}\Omega$		
3-3-3	Thermal Shock	Mate connectors and subject to the following conditions for 5 cycles. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.	Appearance No Damage		
	(Temperature Cycling Test)	a) $-55 \pm 0/-3^{\circ}$ C , 30 minutes(Min) b) $25 \pm 10/-5^{\circ}$ C , 5 minutes(Max) c) $85 \pm 3/-0^{\circ}$ C , 30 minutes(Min) d) $25 \pm 10/-5^{\circ}$ C , 5 minutes(Max) EIA-364-32E	Contact Resistance $\leq 40 \text{m}\Omega$		
3-3-4	Cold Resistance	Mate connectors and expose to -40 ± 3 °C for 96 +5/-0 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.	Appearance No Damage		
(Low Temperature Te		E1A-364-59A	Contact Resistance $\leq 40 \text{ m} \Omega$		
		Mate connectors and expose to 40 ± 2 °C , relative humidity 90 to 95% for 96 hours. Upon completion of the exposure period, the	Appearance No Damage		
3-3-5	Humidity	test specimens shall be conditioned at ambient room conditions for 5 hours, after which the	Withstanding Voltage : Meet 3-1-3		
	-	specified measurements shall be performed. EIA-364-31B	Insulation esistance : $\geq 10 M \Omega$		
			Contact Resistance $\leq 40 \text{ m} \Omega$		

PRODUCT SPECIFICATION

3-3 Environmental Performance and Others

	Item	Test Condition	Requirement		
3-3-6	Resistance To Soldering Heat	Soldering iron method Solder Time : 3 ± 0.5 sec Solder Temperature: $350\pm10^{\circ}$ C However, without too much pressure to the terminal pin. EIA-364-56D	Appearance No Damage		
		Using the reflow profile condition below paragraph 5-1. The product was reflowed two times.	Appearance No Damage		
3-3-7	Steam Aging	Steam Aging Temperature : 98±2 °C Duration: 8 hours±5 minutes Solder Temperature : 245±3 °C	Appearance No Damage		
3-3-8	Solder Ability	Soldering Time : 3±0.5 sec EIA-364-52A	Solder Wetting : 95% Of Immersed Area Must Show No Voids, Pin Holes		
		Mate connectors and expose to the following salt mist conditions. Upon completion of the	Appearance No Damage		
3-3-9	Salt Spray	exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified measurements shall be performed. NaCl solution : 5 % Ambient temperature : 35+1/-2°C Spray time : 48 hours This test only gold-plated products EIA-364-26B	Contact Resistance $\leq 40 \text{m}\Omega$		
3-3-10	Temperature Rise Test	Carrying rated current load. EIA-364-70B	Temperature Rise : 30 °C (MAX)		
		Mate connectors and subject to the following shock conditions. 3 shocks shall be applied along 3 mutually perpendicular axes, passing	Appearance No Damage		
3-3-11	Mechanical Shock (Physical Shock)	DC 1 mA current during the test. (Total of 18 shocks) Test pulse : Half Sine	Contact Resistance $\leq 40 \mathrm{m}\Omega$		
		Peak value : 490 m/s ² {50 G} Duration : 11 ms EIA-364-27B	Discontinuity 1µsec MAX		
2 2 1 2	SO2 Gas	24 hours exposure to 50±5ppm. SO2 gas at $40\pm2^{\circ}C$	Appearance No Damage		
3-3-12	Mixed Flowing GAS Test	EIA-364-65A	Contact Resistance $\leq 40 \text{m}\Omega$		
3-3-13	NH3 Gas	40 minutes exposure to NH3 gas evaporating from 28% Ammonia solution.	Appearance No Damage		
5 5 15	Mixed Flowing GAS Test	EIA-304-03A	Contact Resistance $\leq 40 \text{m}\Omega$		

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4-1

Unit:kgf

	At Ir	nitial	At 30th		
Pin No.	Pin No. I.F(MAX)		W.F(Min)		
3	1.9	0.31	0.31		
4	2.2	0.33	0.33		
5	2.2	0.33	0.33		
6	2.2	0.33	0.33		

PRODUCT SPECIFICATION

5-1 Infrared Reflow Condition

- 1) Ascending time to preheating temperature 170°C shall be 40 seconds minimum.
- 2) Preheating shall be fixed at 160...180°C for 60...90 seconds.
- 3) Heating shall be fixed at 220°C for 50...60 seconds.
- 4) At 260±5°C peak shall be 10 seconds maximum.



TEST SEQUENCES

	Test or examination						Tes	st G	rop					
		Α	В	С	D	Е	F	G	Н	Ι	J	K	L	Μ
1	Examination of Product	1,5	1,6	1,4	1,4	1,4	1,4	1,2	1,4	1,4	1,3	,1,4	1,4	1,4
2	Contact Resistance	2,6	2,7	2,5	2,5	2,5	2,5			2,5		2,5	2,5	2,5
3	Insulation Resistance	3,7	3											
4	Dielectric Strength or Withstanding Voltage Test	8	8											
5	Mating and Un mating Force Test		4											
6	Terminal & Fitting Nail / Housing Retention Force													
7	Durability		5											
8	Vibration			3										
9	Temperature Life Test (Heat Resistance)				3									
10	Thermal Shock (Temperature Cycling Test)					3								
11	Cold Resistance (Low Temperature Test)						3							
12	Humidity	4												
13	Resistance To Soldering Heat							3						
14	Steam Aging								2					
15	Solder Ability								3					
16	16 Salt Spray									3				
17	Temperature Rise Test										2			
18	Mechanical Shock (Physical Shock)											3		
19	SO2 Gas Mixed Flowing GAS Test												3	
20	NH3 Gas Mixed Flowing GAS Test													3

Wire To Board Handling Precautions

This manual is to describe basic precautions. When there are doubtful points in use of, please contact E&T.

1. Common Handling Precautions

- Do not expose E&T's wire to board connector, processing process product and processing product to corrosive substance, corrosive gas, high temperature and high humidity and direct sunshine. It causes corrosion of contact and deterioration of insulation performance of housing, etc., so that it causes motion defect of appliances.
- Do not apply external load to E&T's wire to board connector, processing process product and processing product . Deformation and breakage, etc. occur, and it causes performance defect of.
- There may be slight differences in the housing coloring, but there will be no influence on the product's performance.
- Please do not conduct any "washing process" on the connector because it may damage the product's function.
- E&T's wire to board connector is not designed for the mating and unmating of the connectors to be performed under the condition of an active electrical circuit. It may cause a spark and product defect if the connectors are mated and unmated in this way.

2. PC Board Precautions

- Exercise caution when handling boards with the connectors installed. Do not apply any forces affecting soldered joints. (see figure 1).
- The mounting specification for coplanarity does not include the influence of warpage of the printed circuit board. (see figure 1).
- Changing recommended pattern causes problems.



3. Precautions Crimped Terminal Insertion

- Terminal must be inserted horizontally oriented (see figure 2).
- Do not attempt to insert crimped terminal in any other direction. (see figure 2).



Figure 2.

4. Precautions When Inserting or Withdrawal Wire To Board

- Do not insert and remove at an angle of 8° or greater. Doing so will cause contact deformation or case damage. (see figure 3).
- Push the wire side connector until firmly closed. At this time, confirm that the wire side connector is mated securely.
- When mounting of connectors, its slant or aberration shall be 3° max.
- Do not insert and remove the connectors when the board side connector is not mounted on the PC board.
- Used Lock type, when removed to connectors, please released positive locks.





RELEASE HISTORY

Rev.	Revisions	Date	Executor	Description
A0	First Release	Jun-10-2011	Juno	First Release
A1	Modify P/N	Jul-19-2011	Juno	Modify P/N
A2	Modify P/N	Jul-25-2011	Juno	Modify P/N
A3	DCN120206	Feb-10-2012	Juno	ADD Handling Precautions
A4	DCN120812	Aug-28-2012	Juno	ADD 5 PIN
A5	REN130401	Apr-01-2013	Juno	ADD 6 PIN