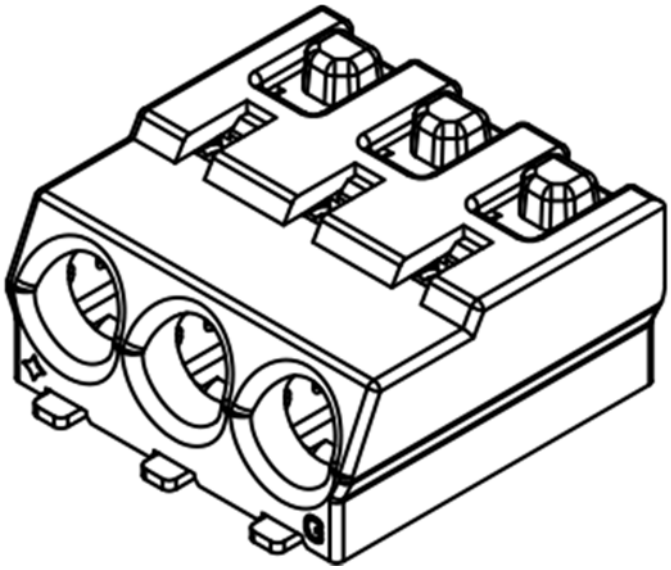
PRODUCT SPECIFICATION

Part Number	BL300		**Rev**	A		**Date**	06/01/16
Product Description	2.40mm Pitch, Surface Mount, Wire Trap Connector					**Page**	1
Doc Number	BL300	**Prepared**	**AO**	**Checked**	**VJ**	**Approved**	**ST**



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1.0 SCOPE.

This specification covers performance, tests and quality requirements for the Wire Trap Connector BL300 (2.40mm pitch, Surface Mount).

2.0 PRODUCT NAME AND PART NUMBER.

2.40mm Pitch, Surface Mount, Wire Trap Connector BL300.

3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL.

Please refer to drawings.

4.0 RATINGS.

Current rating ……. 4 Amp max.

Voltage rating …… 300 Volts AC (rms.) max.

Operating Temperature Range …… -40°C to +105°C

5.0 TEST AND MEASUREMENT CONDITIONS.

Product is designed to meet electrical, mechanical and environmental performance requirements. specified in Paragraph 6.0. All tests are performed at ambient environmental conditions unless otherwise specified.

6.0 PERFORMANCE.

Item	Test Condition	Requirement
Examination of Product	Visual, dimensional and functional inspection as per quality plan.	Product shall meet requirements of product drawing and specification.

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6.1 Electrical Performance.

Item	Test Condition	Requirement
Contact Resistance (Low Level)	Measure with low voltage less than 100mA max and 20mV In accordance with EIA-364-23.	20 mΩ maximum
Insulation Resistance	Apply 500V DC between adjacent contacts and measure its resistance within 1 minute. In accordance with EIA-364-21.	1000 MΩ minimum
Dielectric Strength	Apply AC 1600V RMS between adjacent contacts. Measure its resistance within 1 minute. In accordance with EIA-364-20.	No breakdown

6.2 Mechanical Performance.

Item	Test Condition	Requirement
Vibration	Frequency: 10-55-10 Hz/minute Amplitude: 1.52mm Direction: Each of X,Y,Z axis directions (Each axis at right-angles to others) Period: 2 hours for each direction. In accordance with EIA-364-28.	No electrical discontinuity greater than 1 μsec (s) shall occur.
Wire Mating Force	Measure force necessary to mate between the counterpart connectors. Testing speed: 25 ± 3mm/minute. In accordance with EIA-364-13.	1.2 kgf max.
Wire Un-Mating Force	Measure force necessary to unmate between the counterpart connectors. Testing speed: 25 ± 3mm/minute. In accordance with EIA-364-13.	. AWG#22 2.0 kgf min.
Mechanical Shock	Max G: 50G Duration: 11 ms 3 Strokes in each X,Y,Z axis In accordance with EIA-364-27.	No electrical discontinuity greater than 1 μsec (s) shall occur.

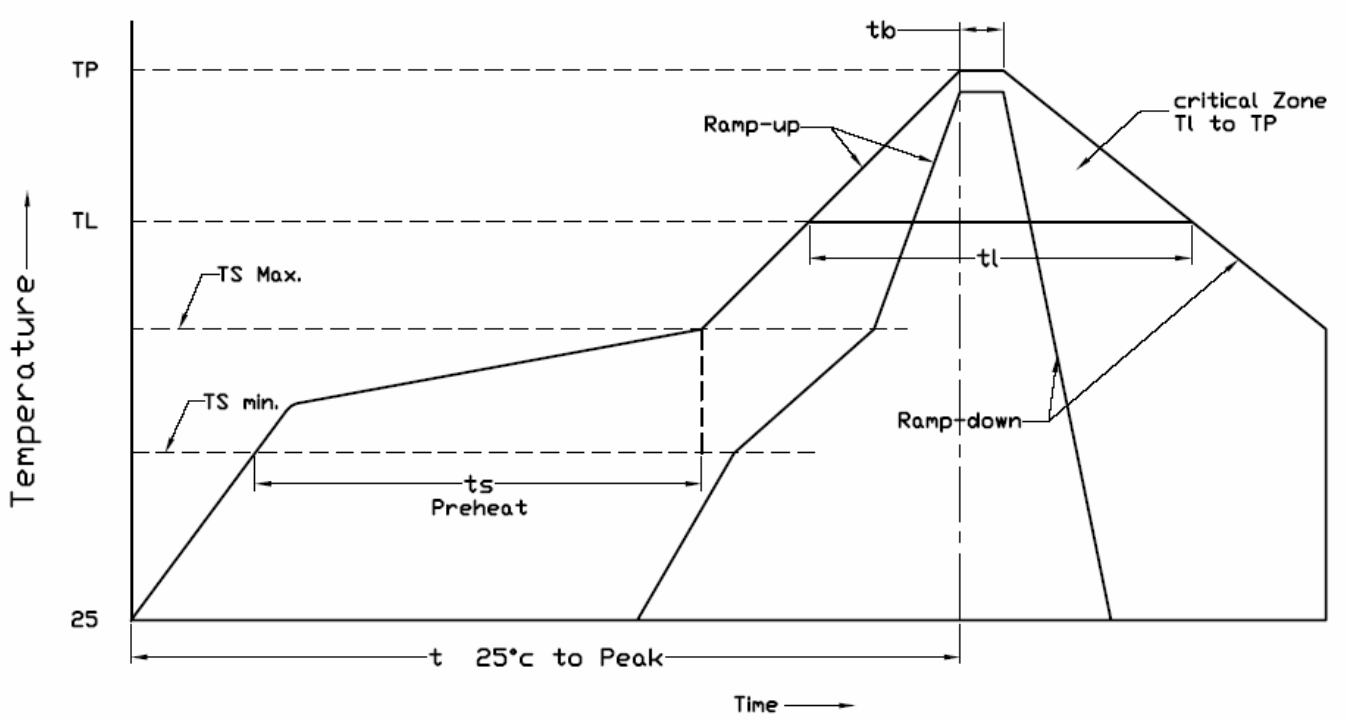
6.3 Environmental Performance and Others.

Item	Test Condition	Requirement
Heat Resistance	Mated connector shall be placed in an oven for 96 hours at 105°C ± 2°C In accordance with EIA-364-17	No damage Insulation Resistance: 100MΩ min. Dielectric: 1600V RMS 1 minute No breakdown Contact Resistance: 40mΩ max.
Cold Resistance	Mated connector shall be placed in a chiller for 96 hours at -40°C ± 2°C In accordance with EIA-364-59	
Humidity Test	Mated connector shall be placed in a humidity chamber for 240 hours on the following conditions: Temperature: 60°C ± 2°C Relative Humidity: 90~95% In accordance with EIA-364-31	
Salt Spray	Mated connector shall be placed in a salt spray chamber on the following conditions: Salt Solution Density: 5% ± 1% Temperature: 35°C ± 2°C Period: Terminal or contact Duration: 48 hours In accordance with EIA-364-26	No corrosion. Contact Resistance: 40 mΩ max.
Temperature Cycling	Mated connector shall be set to temperature cycling for 10 cycles of which 1 cycle consists of a) -40°C for 30 minutes b) +105°C for 30 minutes In accordance with EIA-364-32	No damage Insulation Resistance: 100MΩ min. Dielectric: 1600V rms 1 minute No breakdown Contact Resistance: 40mΩ max.
Temperature Rise	Apply rated current to contacts connected in series using 22 AWG stranded wire. Measure change of temp. on contact. In accordance with EIA-364-70 Method 1.	Temp. rise: 30°C max
Solderability	After dipping in flux for 5 to 10 seconds, dip in Sn-Ag-Cu solder (Sn 96.5%). 245°C ± 2°C for 3s ± 0.5s In accordance with EIA-364-52.	Contact solder pad has a min. 95% solder coverage
Resistance to Soldering Heat	According to attached reflow profile. Time: 5s ± 0.5s Peak Temperature: 260°C ± 5°C	No damage

6.4 REFLOW SOLDERING PROFILE

Pb-free reflow profile requirements

Parameter	Specification
Average Ramp-Up rate (TL to TP)	3°C/s max.
Preheating Temperature	150°C~200°C
Preheating Time	60-180 seconds
TS max. to TL Ramp-Up Rate	3°C/s max.
Preheat Temp. min. (TL)	217°C
Preheat Time (tl)	60-150 seconds
Peak Temperature (TP)	260°C +0/-5°C
Time within 5°C of actual Peak Temp. (tb)	20-40 seconds
Ramp-Down Rate	6°C/second max.
Time to 25°C Peak Temperature	8 minutes max.



7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

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Test Item	Test Group										
	A	B	C	D	E	F	G	H	I	J	
Examination of Product	1,9	1,3	1,4	1,6	1,9	1,9	1,9	1,5	1,3	1,3	
Contact Resistance (Low Level)	2,6			2,5	2,8	2,6	2,8	2,4			
Insulation Resistance	3,7				3,6	3,7	3,6				
Dielectric Withstanding Voltage	4,8				4,7	4,8	4,7				
Temperature Rise		2									
Mating Force			2								
Un-Mating Force			3								
Vibrating				3							
Mechanical Shock				4							
Heat Resistance					5						
Cold Resistance						5					
Humidity	5										
Temperature Cycling							5				
Salt Spray								3			
Solderability									2		
Resistance to Solder Heat										2	

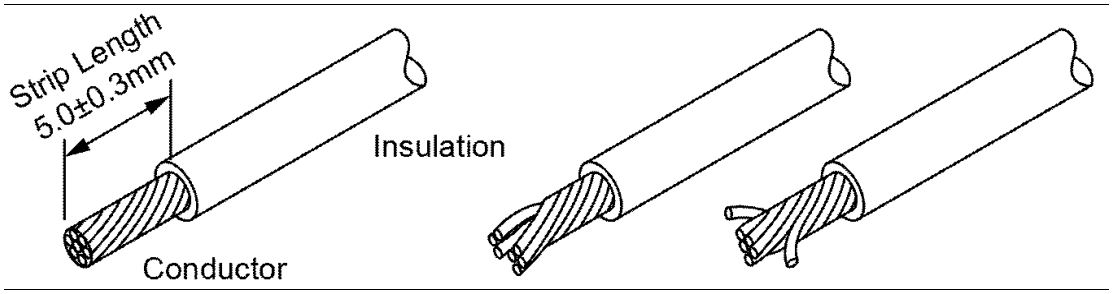
8.0 WIRE INFORMATION

8.1 APPLICABLE WIRES

Wire Range	No. of Conductors / Conductors Ø (mm)	Insulation Ø (mm)	Conductor Type
AWG#22	17 / 0.76 *(ref.)* After tinning: ¢ 0.8mm max	1.50 *(max)*	Stranded
AWG#24	17 / 0.2 (ref.) After tinning: ¢ 0.8mm max		

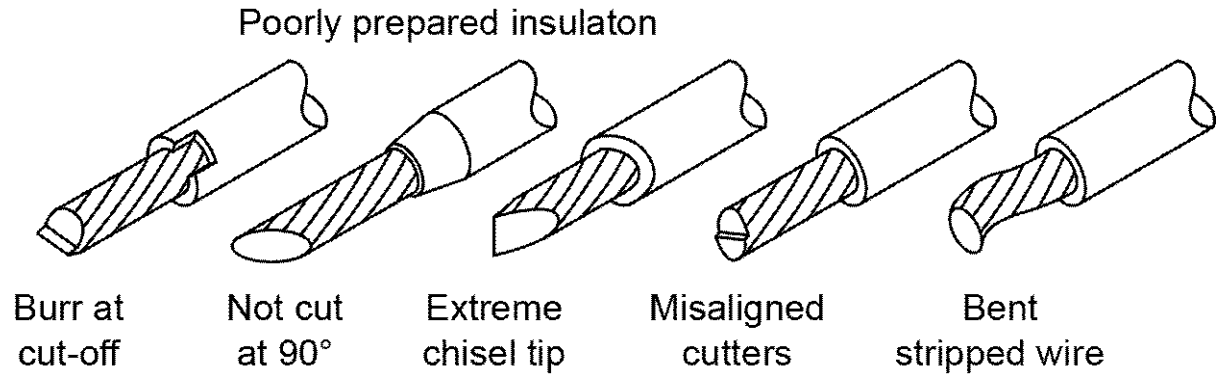
8.2 WIRE STRIP LENGTH

RECOMMENDED NOT RECOMMENDED

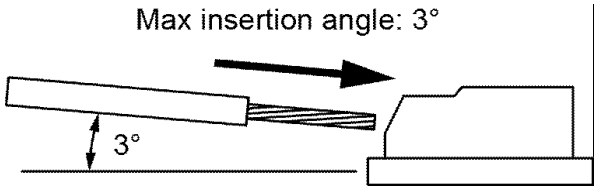


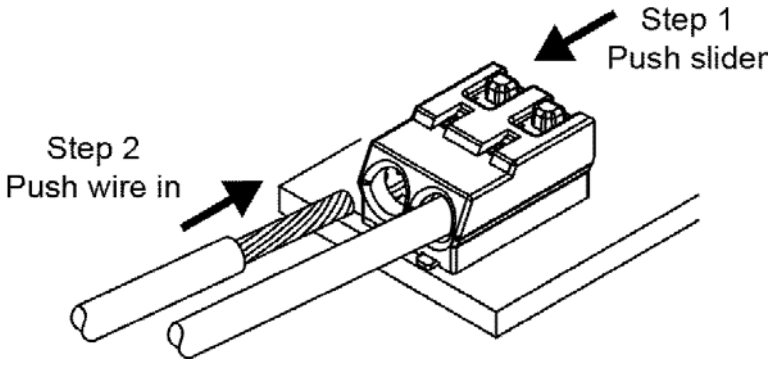
8.3 WIRE PREPARATION

NOT RECOMMENDED



8.4 WIRE INSERTION





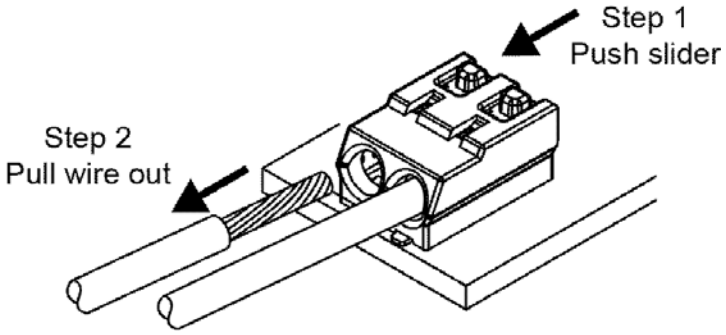
NOTE:

Stranded wire stripped & tinned can be inserted without pushing the slider as long as care is taken.

Stranded wire stripped but not tinned must only be inserted with pushing the slider (Gently with finger or plastic tool. Plastic tool is anything plastic that is the right size to operate the slider. No special tool is required.)

Having pushed the wire in for Step 2, the slider can be released, please DO NOT push the slider back to its original position. The slider will return to its original position by itself.

8.5 WIRE EXTRACTION



- Push the slider slightly with fingers or plastic tool to separate the wire
- Re-cut and strip the wire if cycled more than 3 times.

NOTE:

Having pulled the wire out for Step 2, the slider can be released, please DO NOT push the slider back to its original position. The slider will return to its original position by itself.

9.0 REVISION DETAILS

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Revision	Information	Page	Release Date
A	Specification Released	-	06/01/2016