

DITTO™ WIRE TO WIRE INTERCONNECTS

1.0 SCOPE

This Product Specification covers the TPA retainer parts of the 3.0 mm (.118 inch) centerline (pitch) Ditto Positive Lock connector series Terminated with 20 to 26 AWG wire using Crimp technology with Tin plating.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

DITTO POSITIVE LOCK TPA 1X2 V-0	150212*
DITTO POSITIVE LOCK TPA 1X3 V-0	
DITTO POSITIVE LOCK TPA 1X4 V-0	
DITTO POSITIVE LOCK TPA 1X5 V-0	
DITTO POSITIVE LOCK TPA 1X6 V-0	
DITTO POSITIVE LOCK TPA 1X7 V-0	
DITTO POSITIVE LOCK TPA 1X8 V-0	
DITTO POSITIVE LOCK TPA 1X2 V-2	150213*
DITTO POSITIVE LOCK TPA 1X3 V-2	
DITTO POSITIVE LOCK TPA 1X4 V-2	
DITTO POSITIVE LOCK TPA 1X5 V-2	
DITTO POSITIVE LOCK TPA 1X6 V-2	
DITTO POSITIVE LOCK TPA 1X7 V-2	
DITTO POSITIVE LOCK TPA 1X8 V-2	

*Used with 150170 and 150201 series housings

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

REFER SD-150212-0000, SD-150213-0000

2.3 SAFETY AGENCY APPROVALS

UL FILE NUMBER: E29179

VDE FILE REFERENCE: 219127

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

PRODUCT SPECIFICATION: PS-150170-0000

REFER SECTION 6.0 FOR ENVIRONMENTAL TEST SEQUENCES

APPLICATION SPECIFICATION: 1502120000-AS

4.0 RATINGS

4.1 TEMPERATURE

Operating: - 40°C to + 105°C

PENDING
APPROVAL

REVISION: C	ECR/ECN INFORMATION: EC No: 178875 DATE: 2018 / 07 / 20	TITLE: PRODUCT SPECIFICATION POSITIVE LOCK WITH TPA DITTO™ INTERCONNECTS	SHEET No. 1 of 4
DOCUMENT NUMBER: PS-150212-0000	CREATED / REVISED BY: SMHAJANSHET	CHECKED BY: NCSR	APPROVED BY: NCSR

5.0 PERFORMANCE

5.1 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	TPA installation to housing	Install the TPA to the Housings at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	4 N MAX. / circuit
2	TPA Latch strength test	Axial Pullout force at a rate of 13 mm/minute (0.5 inch per minute)	60 N MINIMUM
3	Shock (Mechanical) EIA-364-1000 Test Group 3	Mate connectors and shock at 50 g's with ½ sine wave (11 milliseconds) shocks in the ±X,±Y,±Z axes (18 shocks total). EIA-364-27, Test condition A	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
4	Vibration (Random) EIA-364-1000 Test Group 3	Mate connectors and vibrate per EIA 364-28, test condition VII. Letter D. (Acceleration 3.1 g)	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond

PENDING
APPROVAL

REVISION: C	ECR/ECN INFORMATION: EC No: 178875 DATE: 2018 / 07 / 20	TITLE: PRODUCT SPECIFICATION POSITIVE LOCK WITH TPA DITTO™ INTERCONNECTS	SHEET No. 2 of 4
DOCUMENT NUMBER: PS-150212-0000	CREATED / REVISED BY: SMAHAJANSHET	CHECKED BY: NCSR	APPROVED BY: NCSR

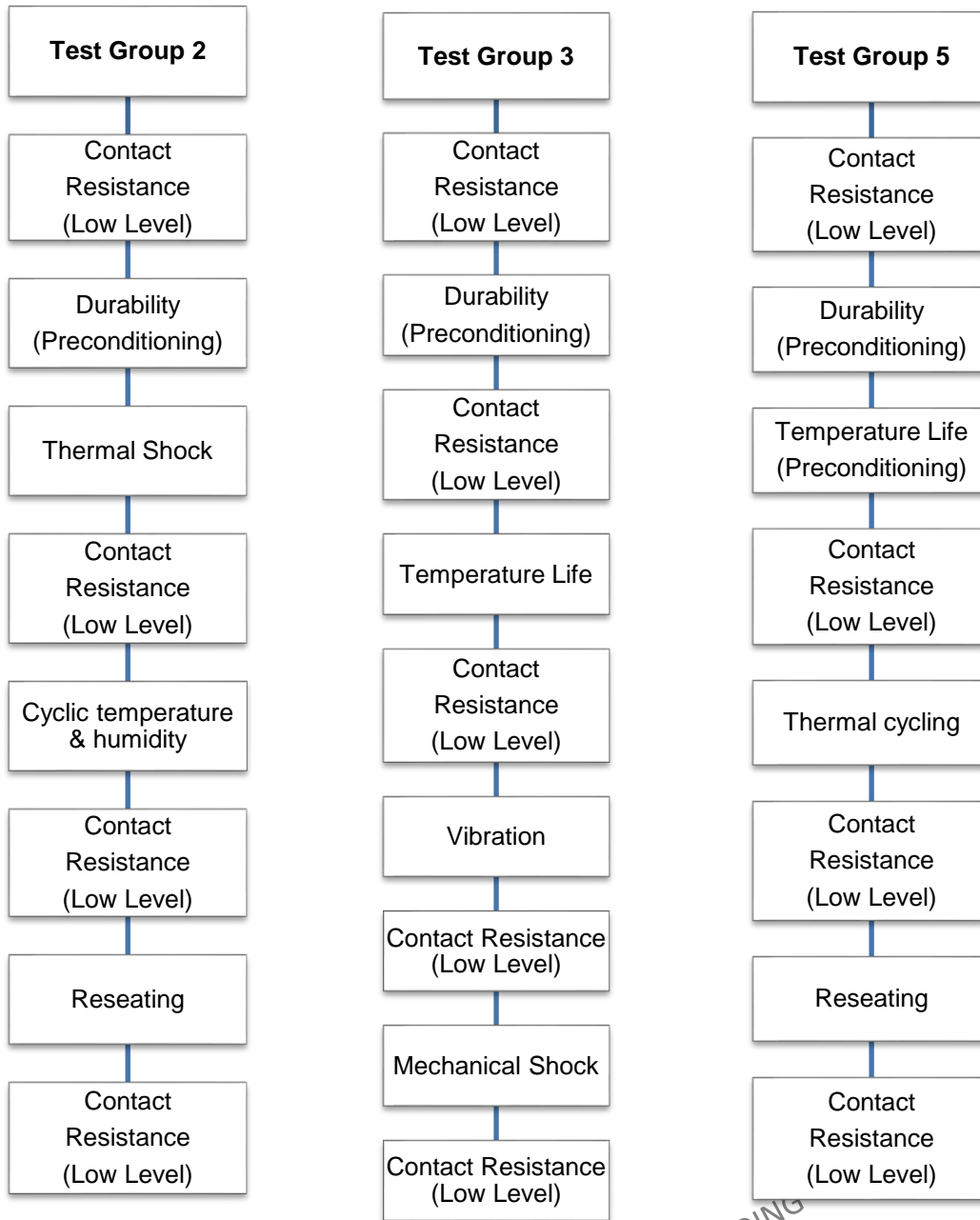
5.2 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT										
5	Shock (Thermal) Thermal Shock EIA-364-32 Test Condition I Test Group 2	Mate connectors; expose to 5 cycles of: <table border="1"> <thead> <tr> <th>Temperature °C</th> <th>Duration (Minutes)</th> </tr> </thead> <tbody> <tr> <td>-40 +0/-3</td> <td>30</td> </tr> <tr> <td>+25 +10/-5</td> <td>5 MAXIMUM</td> </tr> <tr> <td>+105 +3/-0</td> <td>30</td> </tr> <tr> <td>+25 +10/-5</td> <td>5 MAXIMUM</td> </tr> </tbody> </table>	Temperature °C	Duration (Minutes)	-40 +0/-3	30	+25 +10/-5	5 MAXIMUM	+105 +3/-0	30	+25 +10/-5	5 MAXIMUM	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
Temperature °C	Duration (Minutes)												
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+25 +10/-5	5 MAXIMUM												
+105 +3/-0	30												
+25 +10/-5	5 MAXIMUM												
6	Cyclic Temperature & Humidity EIA-364-1000 Test Group 2	Mate connectors: cycle per EIA-364-31: 24 cycles at temperature $25 \pm 3^{\circ}\text{C}$ at $80 \pm 5\%$ relative humidity and $65 \pm 3^{\circ}\text{C}$ at $50 \pm 5\%$ relative humidity; dwell time of 1.0 hour; ramp time of 0.5 hours.	10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 1000 Megohms MINIMUM & Visual: No Damage										
7	Thermal Cycling EIA-364-1000 Test Group 5	Cycle the connector between $15^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and $85^{\circ}\text{C} \pm 3^{\circ}\text{C}$. Humidity is not controlled. EIA-364-1000, Table 5	10 milliohms MAXIMUM (change from initial) & Visual: No Damage										

PENDING APPROVAL

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6.0 TEST SEQUENCES



7.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

PENDING APPROVAL

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