



PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers the TNCA product family (Interface Only) and is a general performance guideline. Please contact Molex RFMS Engineering for specific design iteration performance ratings. As customer end use applications vary greatly, the performance requirements stated within are superseded by performance requirements stated on the Molex Sales Drawing(s).

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME

TNCA

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

MIL-STD-348B

4.0 RATINGS

4.1 VOLTAGE

500 Vrms at Sea Level

4.2 TEMPERATURE

Rating: - 65°C TO + 165°C

4.3 FREQUENCY RATING

DC to 18 GHz

4.4 NOMINAL IMPEDANCE

50 Ohm

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| REVISION: A2 | ECR/ECN INFORMATION: EC No: 175913 DATE: 2018 / 05 / 14 | TITLE: TNCA PRODUCT FAMILY INTERFACE ONLY | SHEET No. 1 of 3 |
| DOCUMENT NUMBER: PS-89675-037 | CREATED / REVISED BY: J. WIENER / AZR | CHECKED BY: S. SHAH | APPROVED BY: WES |



PRODUCT SPECIFICATION

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|-------------------------------------|--|---|
| 1 | Insulation Resistance | MIL-PRF-39012, paragraph 3.11 | >=5000 Megohms |
| 2 | Dielectric Withstanding Voltage | MIL-PRF-39012, paragraph 3.17 | 1500 Vrms |
| 3 | Low Level Contact Resistance (LLCR) | MIL-PRF-39012, paragraph 3.16 Center Contact Outer Contact | Initial: Baseline (Reference Only) Post Environment: 10.0 Milliohms Max Increase Initial: Baseline (Reference Only) Post Environment: 10.0 Milliohms (Noble Plating) 20.0 Milliohms (Non-Noble Plating) Max Increase |
| 4 | Voltage Standing Wave Ratio | MIL-PRF-39012, paragraph 3.14 | See Sales Drawing |
| 5 | RF Insertion Loss | MIL-PRF-39012, paragraph 3.27 | Application specific. See Sales Drawing where applicable. |

5.2 MECHANICAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|-------------------------------|---|--------------------------------------|
| 6 | Material | MIL-PRF-39012, paragraph 3.3 | See Sales Drawing |
| 7 | Finish | MIL-PRF-39012, paragraph 3.3.1 | See Sales Drawing |
| 8 | Design | MIL-PRF-39012, paragraph 3.4 | See Sales Drawing |
| 9 | Recommended Mating Torque | MIL-PRF-39012 | 8-10 inch-pounds |
| 10 | Force to Engage and Disengage | MIL-PRF-39012, paragraph 3.5.1 Axial Force Radial Force | N/A 2 in-lb MAX |
| 11 | Coupling Proof Torque | MIL-PRF-39012, paragraph 3.6 | 15 inch-pounds |
| 12 | Coupling Retention | MIL-PRF-39012, paragraph 3.25 | 100 pounds |
| 13 | Connector Durability | MIL-PRF-39012, paragraph 3.15 | 500 Cycles |
| 14 | Center Contact Retention | MIL-PRF-39012, paragraph 3.12 Axial Force | 6.0 lbs (Captivated designs only) |

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5.3 ENVIRONMENTAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|------------------------|--|--|
| 15 | Vibration | MIL-PRF-39012, paragraph 3.18 Per MIL-STD-202, Method 204 | Test Condition B Signal (Center) LLCR: 10.0 Milliohms Max Increase Post Environment Outer Conductor LLCR: 10.0 Milliohms (Noble Plating) 20.0 Milliohms (Non-Noble Plating) Max Increase Post Environment |
| 16 | Shock | MIL-PRF-39012, paragraph 3.19 Per MIL-STD-202, Method 213 | Test Condition I Signal (Center) LLCR: 10.0 Milliohms Max Increase Post Environment Outer Conductor LLCR: 10.0 Milliohms (Noble Plating) 20.0 Milliohms (Non-Noble Plating) Max Increase Post Environment |
| 17 | Temperature Cycling | Per MIL-STD-202, Method 107 | Test Condition C Signal (Center) LLCR: 10.0 Milliohms Max Increase Post Environment Outer Conductor LLCR: 10.0 Milliohms (Noble Plating) 20.0 Milliohms (Non-Noble Plating) Max Increase Post Environment |
| 18 | Corrosion (Salt Spray) | MIL-PRF-39012, paragraph 3.13 Per MIL-STD-202, Method 101 | Test Condition B |
| 19 | Moisture Resistance | MIL-PRF-39012, paragraph 3.21 Per MIL-STD-202, Method 106 | DWV 1500 Vrms (after drying) |

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