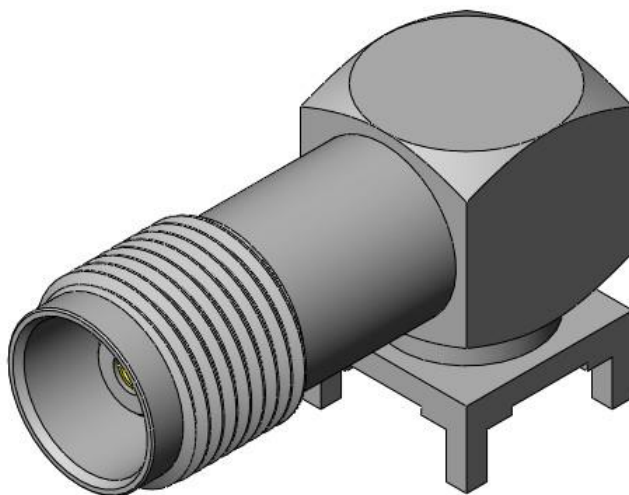


Series: **TNC** 50 Ω TNC Jacks & Plugs

TNC-TH – Jack, Straight Orientation, PCB Terminated



TNC-CA– Plug, Straight Orientation, Cable Terminated



Other configurations available for:

- Right angle cable-to-board applications
- Through-hole
- Termination to various cable types

See www.samtec.com for more information.

Series: TNC 50Ω TNC Jacks & Plugs

1.0 SCOPE

- 1.1 This specification covers performance, testing and quality requirements for Samtec TNC Series 50 ohm Jacks & Plugs. These connectors are available in through-hole. All information contained in this specification is for a right angle jack through-hole connector to a straight plug cable connector unless otherwise noted.

2.0 DETAILED INFORMATION

- 2.1 Product prints, footprints, catalog pages, test reports and other specific, detailed information can be found at <http://www.samtec.com/rf/50-ohm/tnc.aspx>.

3.0 TESTING

3.1

ITEM	RG174			RG316			RG178			RG 58		
Terminal Orientation	RA	ST	SR	RA	ST	SR	RA	ST	SR	RA	ST	SR
Withstanding voltage	1000 DCV			1000 DCV			1000 DCV			1000 DCV		

3.2 Electrical:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Withstanding Voltage	EIA-364-20 (No Flashover, Sparkover, or Breakdown)	See Section 3.1	Pass
Insulation Resistance	EIA-364-21 (5000 MΩ minimum)	15,000 MΩ	Pass
Contact Resistance (LLCR)	EIA-364-23	Δ 15 mΩ maximum (Samtec defined)/ No damage	Pass

3.3 Mechanical:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Durability	EIA-364-09C	100 cycles (w/Env.) 1000 cycles (w/o Env)	Pass
Random Vibration	EIA-364-28 Condition V, Letter B 7.56 G 'RMS', 50 to 2000 Hz, 2 hours per axis, 3 axis total, PSD 0.04	Visual Inspection: No Damage LLCR: Δ 15 mΩ maximum Event Detection: No interruption > 1.0 microsecond	Pass
Mechanical Shock	EIA-364-27 100 G, 6 milliseconds, half sine, 12.3 ft/s, 3 shocks/direction, 3 axis (18 total shocks)	Visual Inspection: No Damage LLCR: Δ 15 mΩ maximum Event Detection: No interruption > 1.0 microsecond	Pass
Normal Force	EIA-364-04	30 grams minimum for gold interface	Pass

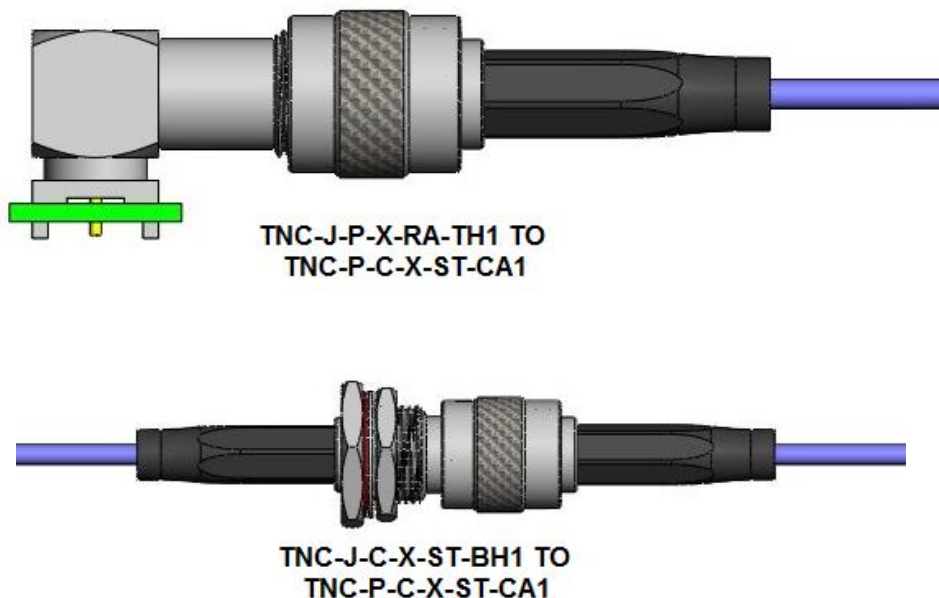
**Series:** TNC 50Ω TNC Jacks & Plugs**3.4 Environmental:**

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Thermal Shock	EIA-364-32 Thermal Cycles: 100 (30 minute dwell) Hot Temp: +85°C Cold Temp: -55°C Hot/Cold Transition: Immediate	Visual Inspection: No Damage LLCR: Δ 15 mΩ DWV: 825 VAC IR: >15,000 MΩ	Pass
Thermal Aging (Temp Life)	EIA-364-17 Test Condition 4 @ 105°C Condition B for 250 hours	Visual Inspection: No Damage LLCR: Δ 15 mΩ	Pass
Cyclic Humidity	EIA-364-31 Test Temp: +25°C to +65°C Relative Humidity: 90 to 95% Test Duration: 240 hours	Visual Inspection: No Damage LLCR: Δ 15 mΩ DWV: 825 VAC IR: >15,000 MΩ	Pass
Gas Tight	EIA-364-36 Gas Exposure: Nitric Acid Vapor Duration: 60 min. Drying Temp.: 50°C +/- 3°C Measurements: Within 1 hour of Exposure	LLCR: Δ 15 mΩ	Pass

Series: **TNC** 50Ω TNC Jacks & Plugs

4.0 MATED SYSTEM

4.1 Orientations



5.0 HIGH SPEED PERFORMANCE

5.1 Frequency Range:

Cable Type	RG174			RG316			RG178			RG 58		
TNC Orientation	RA	ST	SR	RA	ST	SR	RA	ST	SR	RA	ST	SR
Frequency Range	DC to 6 GHz			DC to 6 GHz			DC to 6 GHz			DC to 6 GHz		

5.2 Impedance: 50 ohm

5.3 Rating: DC to 6 GHz

Series: TNC 50Ω TNC Jacks & Plugs

6.0 APPLICATION INFORMATION

6.1 Mating Torque

6.1.1 Min 4.1 in-lb

6.1.2 Recommended 5 in-lb

6.1.3 Max 6.1 in-lb

6.2 Min Cable Bend Radius: RG174 = 1.00"[25.4mm]

RG316 = .50"[12.7mm]

RG178 = .40"[10.2mm]

RG 58 = 1.90"[48.3mm]

6.3 Cable Retention: 15 LBS (Typical)

7.0 ADDITIONAL RESOURCES

7.1 For additional mechanical testing or product information, contact our Customer Engineering Support Group at

CES@samtec.com

7.2 For additional information on high speed performance testing, contact our Signal Integrity Group at

SIG@samtec.com

7.3 For additional processing information, contact our Interconnect Processing Group at IPG@samtec.com

7.4 For RoHS, REACH or other environmental compliance information, contact our Product Environmental

Compliance Group at PEC@samtec.com

USE OF PRODUCT SPECIFICATION SHEET

This Product Specification Sheet ("PSS") is a brief summary of information related to the Product identified. As a summary, it should only be used for the limited purpose of considering the purchase/use of Product. For specific, detailed information, including but not limited to testing and Product footprint, refer to Section 2.0 of this document and the links there provided to test reports and prints. This PSS is the property of Samtec, Inc. ("Samtec") and contains proprietary information of Samtec, our various licensors, or both. Samtec does not grant express or implied rights or license under any patent, copyright, trademark or other proprietary rights and the use of the PSS for building, reverse engineering or replication is strictly prohibited. By using the PSS, the user agrees to not infringe, directly or indirectly, upon any intellectual property rights of Samtec and acknowledges that Samtec, our various licensors, or both own all intellectual property therein. The PSS is presented "AS IS". While Samtec makes every effort to present excellent information, the PSS is only provided as a guideline and does not, therefore, warrant it is without error or defect or that the PSS contains all necessary and/or relevant information about the Product. The user agrees that all access and use of the PSS is at its own risk. **NO WARRANTIES EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY KIND WHATSOEVER ARE PROVIDED.**