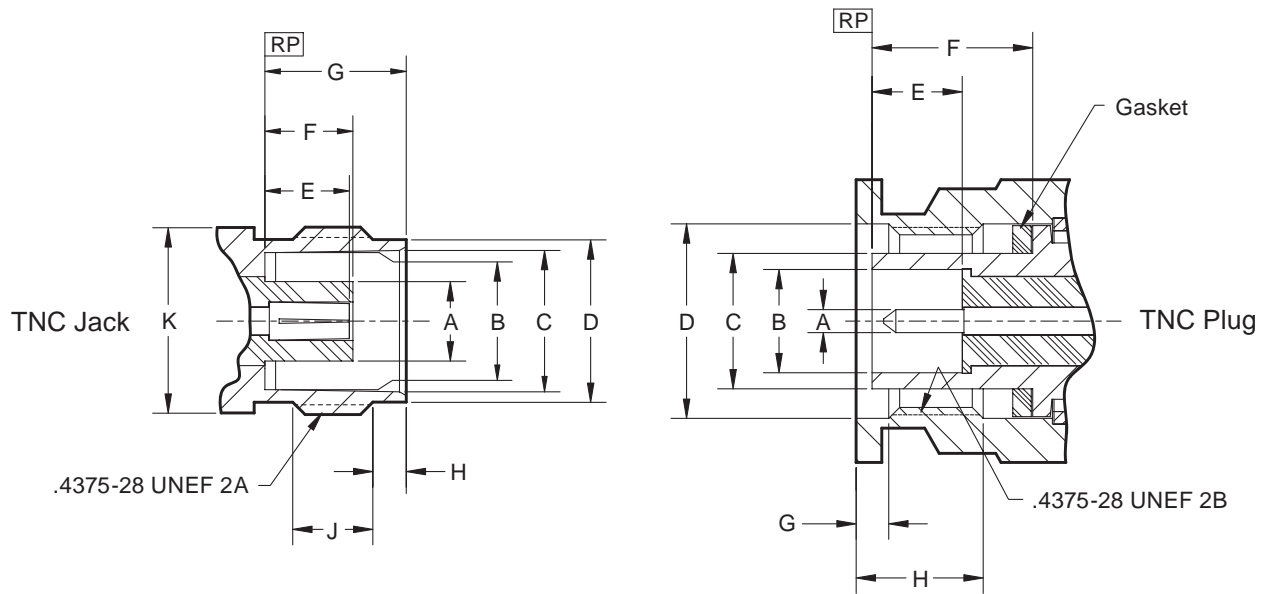


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## TNC Series

### Interface Standards



**TNC Jack (Socket Contact)**

LTR	Inches (Millimeters)			
	Minimum		Maximum	
A	.184	(4.67)	.186	(4.72)
B	.319	(8.10)	.321	(8.15)
C	.327	(8.31)	.333	(8.46)
D	.378	(9.60)	.381	(9.68)
E	.201	(5.11)	.206	(5.23)
F	.198	(5.03)	.208	(5.28)
G	.327	(8.31)	.333	(8.46)
H	.068	(1.73)	.088	(2.24)
J	.187	(4.75)	.210	(5.33)
K	.425	(10.80)	.440	(11.18)
	Inch	(mm)	Inch	(mm)

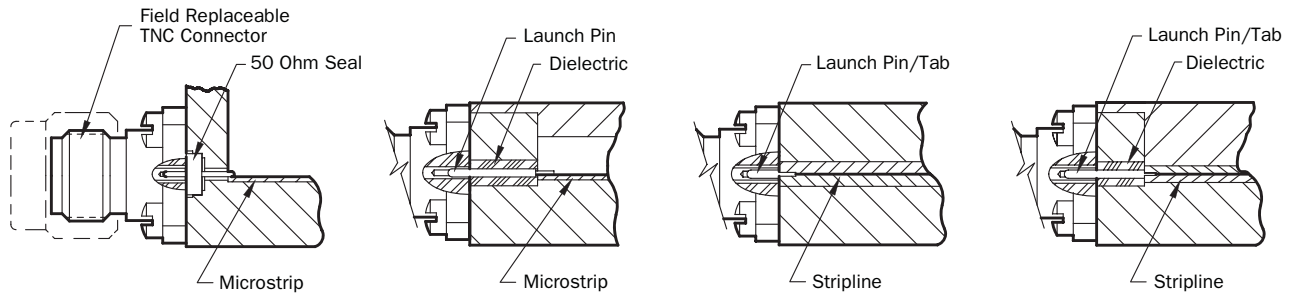
**TNC Plug (Pin Contact)**

LTR	Inches (Millimeters)			
	Minimum		Maximum	
A	.052	(1.32)	.054	(1.37)
B	.238	(6.05)	.242	(6.15)
C	.314	(7.98)	.318	(8.08)
D	.440	(11.18)	—	—
E	.208	(5.28)	—	—
F	.365	(9.27)	.385	(9.78)
G	.063	(1.60)	—	—
H	.265	(6.73)	.280	(7.11)
	Inch	(mm)	Inch	(mm)

Note: Interface I.A.W. MIL-PRF-39012 and MIL-STD-348, Figures 313-1 and 313-2.

## Specifications

### Applications



#### Available Accessories:

- 50 Ohm Seal
- Launch Pin & Dielectric
- Launch Pin/Tab
- Launch Pin/Tab & Dielectric

See Launch Accessories Section.

#### Electrical:

- Mode Free Through 18.0 GHz
- Low VSWR: DC to 18.0 GHz.....1.15:1 max
- Low RF Leakage  $\leq$  -100 dB
- Low Insertion Loss

#### Materials / Construction:

- Housing: Steel, CRES Alloy UNS S30300 Per ASTM A582, Passivated Per ASTM A967
- Contact: Beryllium Copper (BeCu), UNS C17300 Per ASTM B196, Gold Plated Per MIL-G-45204 or ASTM B488
- Dielectric: Virgin PTFE Fluorocarbon Per ASTM D1710
- Center Contact Capture: High Temperature Ultem 1000 Per ASTM D5205
- Connector Interface: Per MIL-STD-348, Figs. 313-1 and 313-2
- Raised Metal Grounding Ring for 360° Metal-to-metal Contact

#### Environmental:

- Temperature: -55° C to +165° C



# TNC Series DC to 18.0 GHz

Super SMA Connectors  
 N Series Connectors  
**TNC Connectors**  
 SSMA Connectors  
 2.92 mm Connectors  
 2.40 mm Connectors  
 End Launch Connectors  
 Adapters  
 Cable Connectors  
 Launch Accessories  
 Installation and Tools

<p><b>TNC JACK (FEMALE)</b>  <b>4 HOLE .500" SQUARE</b></p>		<p>* ACCEPTS PIN DIA.</p> <table border="1"> <tr><td>.036</td></tr> <tr><td>.020</td></tr> <tr><td>.018</td></tr> <tr><td>.015</td></tr> </table>	.036	.020	.018	.015	<p>Connector No.</p> <table border="1"> <tr><td>412-32SF</td></tr> <tr><td>412-31SF</td></tr> <tr><td>412-30SF</td></tr> <tr><td>412-33SF</td></tr> </table>	412-32SF	412-31SF	412-30SF	412-33SF
.036											
.020											
.018											
.015											
412-32SF											
412-31SF											
412-30SF											
412-33SF											
<p><b>TNC JACK (FEMALE)</b>  <b>4 HOLE .687" SQUARE</b></p>		<p>* ACCEPTS PIN DIA.</p> <table border="1"> <tr><td>.036</td></tr> <tr><td>.020</td></tr> <tr><td>.018</td></tr> <tr><td>.015</td></tr> </table>	.036	.020	.018	.015	<p>Connector No.</p> <table border="1"> <tr><td>412-36SF</td></tr> <tr><td>412-35SF</td></tr> <tr><td>412-34SF</td></tr> <tr><td>412-29SF</td></tr> </table>	412-36SF	412-35SF	412-34SF	412-29SF
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.018											
.015											
412-36SF											
412-35SF											
412-34SF											
412-29SF											
<p><b>TNC PLUG (MALE)</b>  <b>4 HOLE .687" SQUARE</b></p>		<p>* ACCEPTS PIN DIA.</p> <table border="1"> <tr><td>.036</td></tr> <tr><td>.020</td></tr> <tr><td>.018</td></tr> <tr><td>.015</td></tr> </table>	.036	.020	.018	.015	<p>Connector No.</p> <table border="1"> <tr><td>411-01SF</td></tr> <tr><td>411-02SF</td></tr> <tr><td>411-03SF</td></tr> <tr><td>411-04SF</td></tr> </table>	411-01SF	411-02SF	411-03SF	411-04SF
.036											
.020											
.018											
.015											
411-01SF											
411-02SF											
411-03SF											
411-04SF											
<p><b>TNC JACK (FEMALE)</b>  <b>THREAD-IN WAVEGUIDE</b></p>		<p>Probe Size</p> <table border="1"> <tr><td>.050D x 740L</td></tr> </table>	.050D x 740L	<p>Connector No.</p> <table border="1"> <tr><td>420-14SF</td></tr> </table>	420-14SF						
.050D x 740L											
420-14SF											



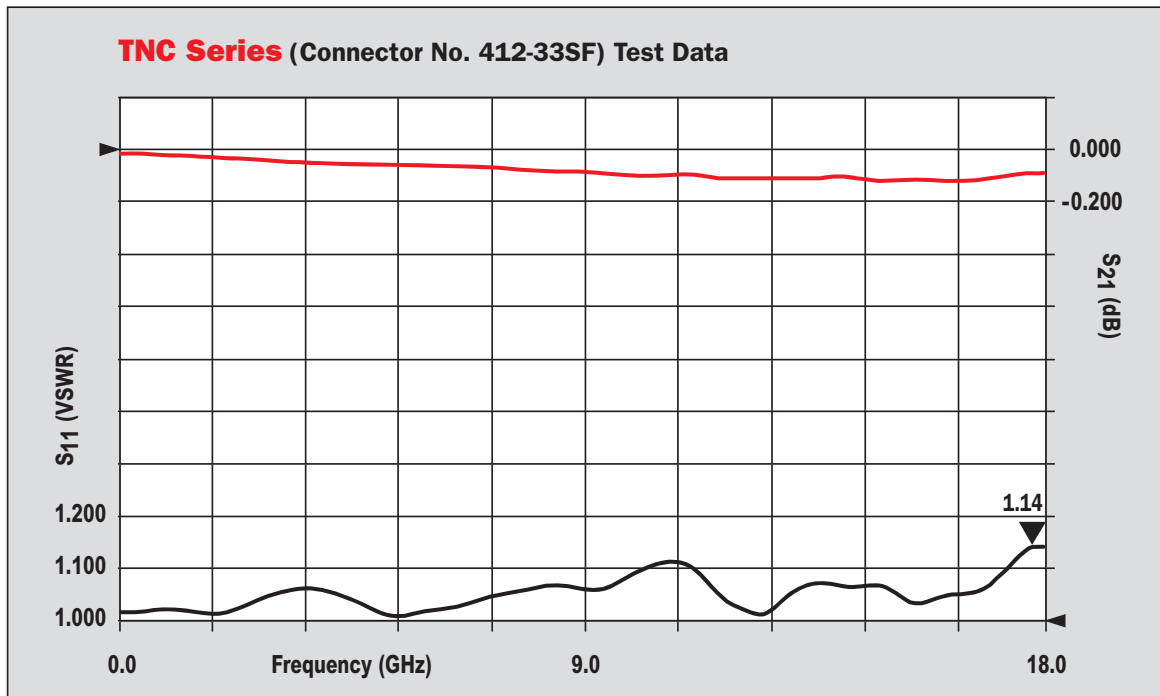
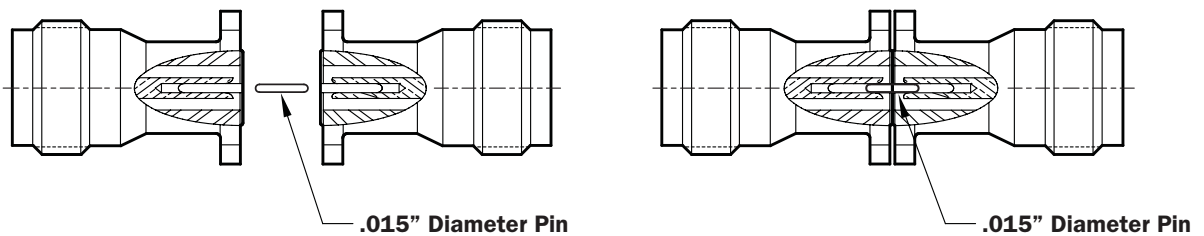
# TNC Series DC to 18.0 GHz

## Typical Test Data

### Back-to-Back Connector Testing

Back-to-back testing shows data for two connectors. Any internal mismatches within the connector will phase together when tested through 18.0 GHz. Taking the square root of the peak VSWR will provide the value for a single connector.

Connector No. 412-33SF with **.015" Test Pin**



$\sqrt{1.14} = 1.07$  Maximum for each connector