



INNOVATION OVERVIEW

pSeries™

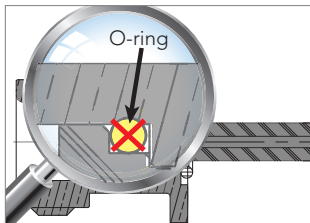
Pressurized Coaxial Solutions

Pressurized coaxial connectors are vital where high pressure is maintained for extended periods and in environments needing protection against moisture and other contaminants — such as agriculture, aviation, and marine applications.

San-tron's pSeries pressurized connectors provide low-loss, high-stability performance and meet all 10^{-5} cm³/sec test conditions of Mil-Std-202, Method-212. Production verification testing is performed via STI 8.2.4-13, 30 psig air over alcohol. The proprietary insulator also offers five times more thermal stability than standard PTFE insulators found in other pressurized connectors.

New Design. No O-rings.

San-tron's new pSeries pressurized connector design expands the typical operating frequency ranges through 30 GHz at +/-65 psi, while eliminating failure-prone internal O-rings. These pressurized connectors, which meet the **IP68 standard**, feature a simplified, three-piece design — body, center contact, and an innovative dielectric — which eliminates troublesome internal O-rings, gaskets, and silicone greases.



San-tron pSeries pressurized connectors are available in a variety of different connector types, including 2.92 mm, 3.5 mm, SMA, TNC, Type N series and DIN 7/16.



Performance

Frequency Range:	30 GHz
Nominal Impedance:	50 ohms
Temperature Range:	-65°/+165°C

Materials

Dielectrics:	pSeries
Contacts (Female):	BeCu
Gaskets:	N/A

Plating

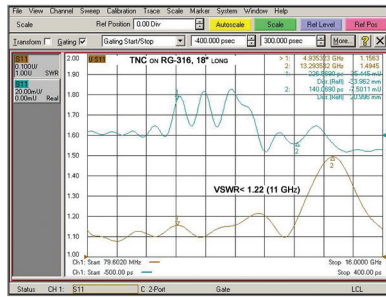
Center Contacts:	Au or Ag
Metal Parts:	SS303, Passivate -or- Brass: Ni, Ag, Au, or Albaloy

Order San-tron's Pressurized Connectors.

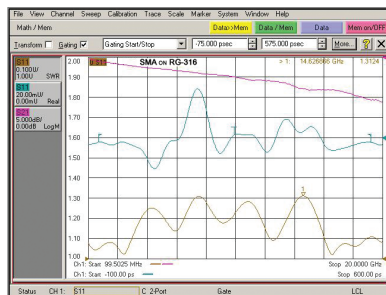
Request a quote or learn more about San-tron's pressurized connectors at www.santron.com.

Company Contact:
Chris Sanders
San-tron, Inc.
chris@santron.com
978-356-1585

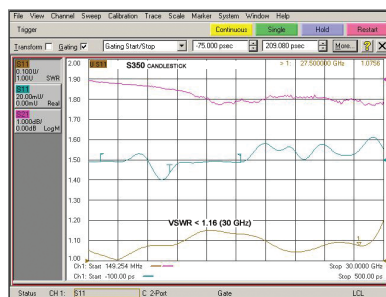




TNC bulkhead jack to TNC bulkhead jack RG316 18"



SMA bulkhead jack to SMA bulkhead jack RG316 36"



3.5mm panel receptacle

Field Performance Examples

Seal Test:

- Performed both before and after thermal shock testing
- Ref Mil-Std-202, Method 112, Test Condition B
- Per Mil Spec detects leak rates of 10^{-5} std atm cm^3/sec
- Implement alcohol in place of oil bath
- Apply air pressures of 0 – 60 psig

Thermal Shock Test:

- Per Mil-Std-202, Method 107, Condition B
- Temperature Exception: -65°C / $+165^\circ\text{C}$, 5-cycles, 1-hr dwells

Interface Thermal Stability:

- Resultant Movement: .0008" (0.02mm)
- Center contact position before Thermals: .0049" \pm .0020" (3-sigma point)
- Center contact position after Thermals: .0041" \pm .0030" (3-sigma point)

Contact Retention:

- Performed both before and after thermal shock testing
- 6 lbs yield .0000" displacement
- 16 lbs force yield .0005" displacement

High-Potential Withstanding Voltage:

- Greater than 1,000 Vrms, 60 Hz

RF 1206-170-PJ:

2-Connectors:

- VSWR < 1.1 (DC-18 GHz)
- VSWR < 1.3 (26 GHz)
- VSWR < 1.5 (30 GHz)

Square Root:

- VSWR < 1.05 (DC-18 GHz)
- VSWR < 1.14 (26 GHz)
- VSWR < 1.23 (30 GHz)

IP68: San-tron's pSeries Meets the Industry Standard

Introducing a novel technique to establish pressurized connectors supporting IP68 in the un-mated condition. This simplified technique only requires the use of three components: the body, center contact, and the proprietary pSeries dielectric. This technique negates the use of internal o-rings, gaskets, and silicone greases. Furthermore, this technique expands the operating frequency ranges through 30 GHz as exemplified by p/n 1406-04-PH. This system has been successfully deployed in 20 GHz ground-based satellite links and agricultural GPS systems, and is being prepped for spaceborne applications.

About San-tron, Inc.

Established in 1955, San-tron designs and manufactures RF and microwave coaxial connectors and cable assemblies in a variety of standard and custom configurations from SMA through LC style. With headquarters, engineering, and manufacturing in Ipswich, Massachusetts, and a wholly-owned, off-shore facility in Suzhou, China, San-tron offers a balanced approach to meeting market demands for high quality and competitive pricing. For more details, visit www.santron.com.