



## TuffTest™

### 40, 50 and 67 GHz Test Cables

San-tron's TuffTest™ 2.92mm, 2.4mm and 1.85mm microwave/RF VNA cables offer superior performance, durability, and value.

Tufftest VNA cables feature a high-performance microwave cable, protected by a wound stainless steel armor casing and an abrasion resistant outer sheath. The resulting construction is highly flexible, crush and torque resistant with virtually no cable spring back.



The test cables are available in 2.92mm, 2.4mm and 1.85mm configurations with male to male or male to female gender. 2.92mm connectors mated directly to SMA or 3.5mm RF connectors. All TuffTest VNA cables provide low VSWR in addition to stable amplitude and phase performance under flexure throughout the specified frequency range.

#### Specifications

##### Electrical

	2.92mm	2.4mm	1.85mm
Nominal Impedance	50 Ohms	50 Ohms	50 Ohms
Frequency Range	DC to 40 GHz	DC to 50 GHz	DC to 67 GHz
Typical VSWR	1.20	1.25	1.28
Amplitude Stability with Flexure	±0.05 dB	±0.06 dB	±0.10 dB
Phase Stability with Flexure	±6°	±7°	±9°
Voltage Rating (sea level)	335 VRMS		
DWV (sea level)	1000 VRMS @60Hz		

##### Environmental

Temperature	-40° to +85°C
-------------	---------------

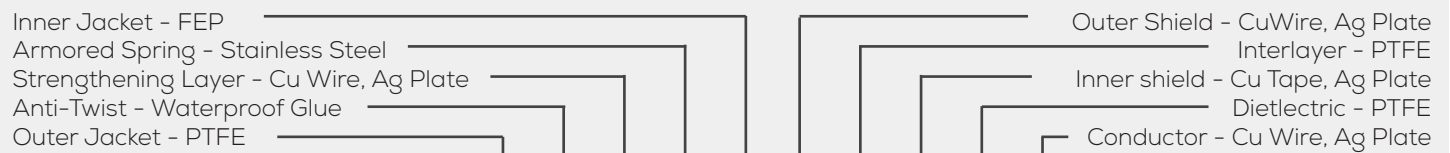
##### Mechanical

	2.92mm	2.4mm	1.85mm
OD of Cable	.236 in	.236 in	.183 in
Minimum Repeated Bend Radius	2.36 in	2.36 in	1.83 in
Maximum Tightening Torque	10 in-lbs.	10 in-lbs.	10 in-lbs.
Flexural Durability	50,000	50,000	50,000
Crush Resistance	> 200 lbs.	> 200 lbs.	> 200 lbs.

## Ordering Information

Series	Connector A	Connector B	Length
TT	29M Male 2.92mm	29M Male 2.92mm	024 2 feet
	29M Male 2.92mm	29F Female 2.92mm	036 3 feet
	24M Male 2.4mm	24M Male 2.4mm	060 5 feet
	24M Male 2.4mm	24F Female 2.4mm	
	18M Male 1.85mm	18M Male 1.85mm	
	18M Male 1.85mm	18F Female 1.85mm	

## TuffTest™ Cable Construction



## Getting the most from your VNA Cables:

### DO

- ✓ Inspect mating surfaces for debris before mating
- ✓ Clean mating surfaces often and cap when not in use
- ✓ Start coupling nut gently by hand, complete tightening with torque limiting wrench

### DON'T

- ✗ Mate connectors with debris on mating surfaces
- ✗ Exceed minimum bend radius of cable
- ✗ Mate connectors that are difficult to engage or appear to have bent pin or deformed female contact

## Precision Adapters

San-tron's high performance, 2.92mm Precision Adapters are made free and deliver low VSWR performance through 40 GHz. Adapters provide for gender conversion and inter-mating between different RF connector series. All San-tron Precision 2.92mm Adapters are phase matched making them ideal for VNA and other test applications.

The Precision 2.92mm Adapters are available in 2.92mm to 2.92mm, 2.92mm to 2.4mm, 2.92 to 1.85mm and 2.92 to SMP configurations with male to male, female to male, male to female or female to female gender. They also directly inter-mate with SMA and 3.5mm RF connectors. Special mounting options may be made available upon request.

The Precision 2.92mm Adapters are made from the finest materials: gold plated beryllium copper contacts, cross linked polystyrene (Rexolite®) capture bead and rugged stainless steel bodies.



To request a quote or learn more about San-tron's TuffTest™ Test Cables contact:

info@santron.com | 978-356-1585