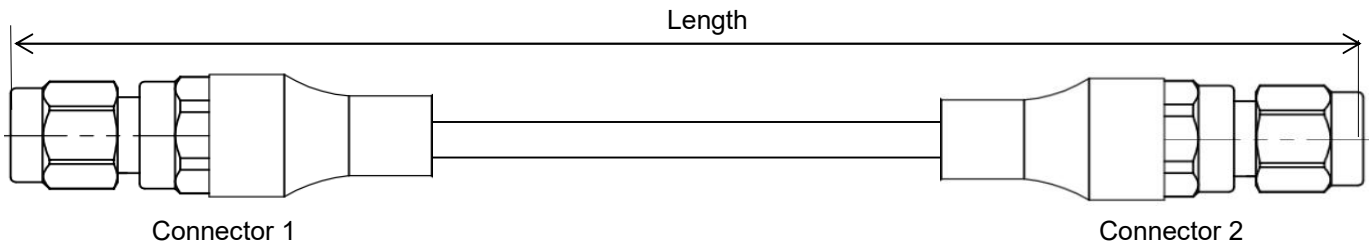


Armored Thermal Vacuum Phase Stable Cable Assembly, Using TVAC520

DC-18 GHz, SMA Male to SMA Male

TVAC520-SMAMSMAM-L-A(L:Length)

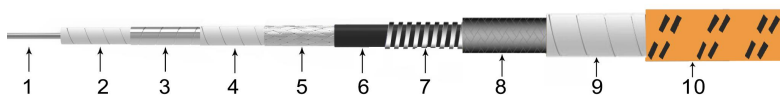


- Length can be in meter or in inch etc, e.g, TVAC520-SMAMSMAM-1M-A. Standard length tolerance $\pm 1.5\%$ or $\pm 5\text{mm}$ whatever is greater.
- Length is measured from one connector end to the other connector end as shown above. For RA connectors, use the pin center-line.

Configuration

Connector 1	Vented SMA male	Connector 2	Vented SMA male
Body	Passivated stainless steel	Body	Passivated stainless steel
Center Contact	Gold plated brass	Center Contact	Gold plated brass
Cable Type	TVAC520	Armor	TVAC-AL780

Cable and Armor Construction



No.	Construction	Size (mm)	Materials
1	Center Conductor	1.45	Solid silver-plated copper
2	Dielectric	4.00	Low density PTFE
3	Outer Conductor	4.20	Silver-plated copper tape wrap
4	Interlayer	4.40	Low density PTFE
5	Outer Shield	4.80	Silver-plated copper wire braid
6	Jacket	5.30	FEP
7	Crush Resistance Layer	6.40	Stainless steel spiral
8	Strengthening Layer	7.00	Silver plated copper braid
9	Waterproof Layer	7.05	PTFE Binder
10	Armor Jacket	7.80	Braiding PTFE



Electrical

Frequency	DC-18 GHz
Impedance	50 Ω
VSWR Max	1.25
IL Max(1 meter assembly)	1.5dB
*Mechanical Phase Stability	$<\pm 5^\circ$
Amplitude Stability vs Shaking	$<\pm 0.15\text{dB}$

Mechanical & Environmental

Min.Bending Radius Static	39mm
Min. Bending Radius Repeated	78mm
Velocity of Propagation	82%
Weight	141g/m
Temperature(Operation)	-55~125 $^\circ\text{C}$
	-55~165 $^\circ\text{C}$ available on demand

* Wrapped 360° around a 78mm radius mandrel.

Bulk Cable Attenuation(Typical@25°C) & Power(VSWR=1.0; 40°C; Sea level)

Frequency MHz	300	1000	2000	4000	6000	8000	10000	12000	14000	18000	20000	26500
dB/100 Meter	12.5	23.0	32.7	46.6	57.4	66.6	74.8	82.3	89.3	101.9	107.8	125.2
Avg.Power kW	1.608	0.875	0.615	0.431	0.350	0.302	0.268	0.244	0.225	0.197	0.186	0.160

Attenuation at any frequency= $[0.715686 \times \text{SQRT}(\text{FMHz})] + [0.000328 \times \text{FMHz}]$

- Notes:**
- 1) The above attenuation refers to typical loss of cable only, max loss is 1.1 times of typical loss. Insertion loss per connector is estimated as $0.03\text{dB} \times \text{SQRT} \text{ Freq}(\text{GHz})$.
 - 2) Power handling values are calculated based on cable properties. Power handling will vary based on connector type and actual VSWR of the cable assembly.

Typical Test Data (TVAC520-SMAMSMAM-1M-A)

