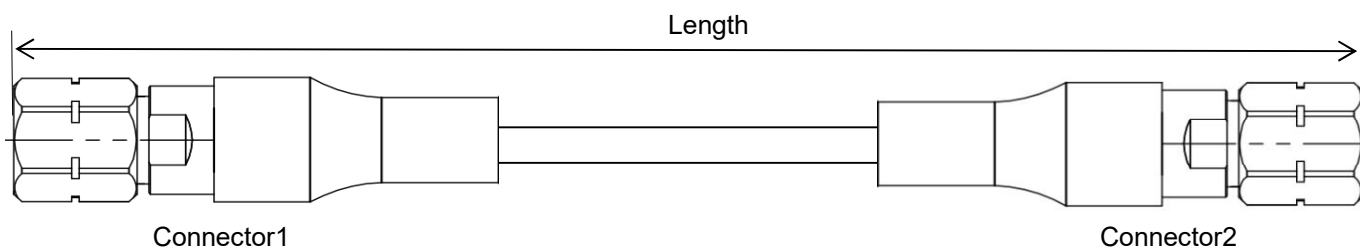


Thermal Vacuum Phase Stable Cable Assembly, Using TVAC-PL380P

DC-40 GHz, 2.92mm Male to 2.92mm Male

TVAC-PL380P-292M292M-L(L:Length)

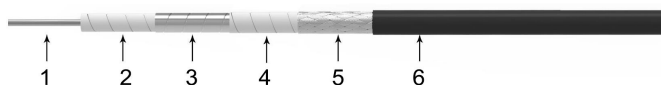


· Length can be in meter or in inch etc, e.g, TVAC-PL380P-292M292M-1M. Standard length tolerance $\pm 1.5\%$ or $\pm 5\text{mm}$ whatever is greater. Length is measured from one connector end to the other connector end as shown above.

Configuration

Connector 1	Vented 2.92mm male	Connector 2	Vented 2.92mm male
Body	Passivated stainless steel	Body	Passivated stainless steel
Center Contact	Gold plated BeCu	Center Contact	Gold plated BeCu
Cable Type	TVAC-PL380P		

Cable Construction



No.	Construction	Size (mm)	Materials
1	Center Conductor	1.02	Solid silver-plated copper
2	Dielectric	2.85	Ultra-low density PTFE
3	Outer Conductor	3.06	Silver-plated copper tape wrap
4	Interlayer	3.22	Low density PTFE
5	Outer Shield	3.67	Silver-plated copper wire braid
6	Jacket	3.80	Black FEP (ETFE available)



Electrical

Frequency	DC-40 GHz
Impedance	50 Ω
Velocity of Propagation	82%
VSWR Max	1.3
IL Max(1 meter assembly)	2.8dB
Temp Phase Stability	<680ppm(-40°C to +85°C)
Amplitude Stability vs Shaking	< $\pm 0.1\text{dB}$
Mechanical Phase Stability	< $\pm 5^\circ$ (Wrapped 360° around a 38mm radius mandrel)

Mechanical & Environmental

Min.Bending Radius Static	19mm
Min. Bending Radius Repeated	38mm
Weight	37g/m
Temperature(Operation)	-50~165 °C(FEP jacket)
Temperature(Operation)	-50~150 °C(ETFE jacket)
Heat Shrink and Label	Low outgassing PVDF
Laser-marked labels, no ink outgassing	

Applications

- Satellite TVAC Chambers
- RF connections in high vacuum conditions
- High-Altitude and Space Simulation Systems
- Aerospace ATE & Ground Support Systems

Thermal Vacuum Phase Stable Cable Assembly, Using TVAC-PL380P

DC-40 GHz, 2.92mm Male to 2.92mm Male

TVAC-PL380P-292M292M-L(L:Length)

Features & Benefits

- Ultra low loss, 2.2dB/meter to 40 GHz
- Excellent phase stability with temp & flexure
- Extended temperature range -55~165 °C
- Low outgassing materials:TML<1%,CVCM<0.1%
- Vented connectors to allow rapid pressurization test
- Thermally conditioned for reliability over temp extremes

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	26500	40000
dB/100 Meter	17.3	31.9	45.5	64.9	80.1	93.1	104.7	115.3	125.1	143.0	176.1	220.5
Avg.Power kW	0.940	0.511	0.359	0.251	0.203	0.175	0.156	0.141	0.130	0.114	0.093	0.074

Attenuation at any frequency=[0.991549×SQRT(FMHz)]+[0.0005555×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 0.03dB x SQRT Freq(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 (TVAC-PL380P-292M292M-1M)

