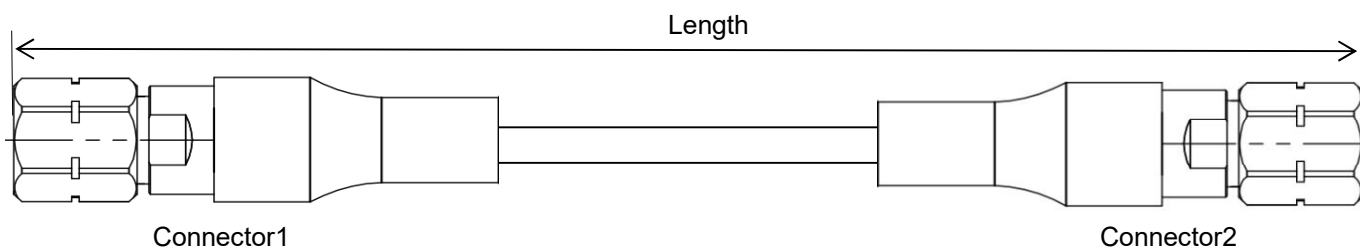


Thermal Vacuum Phase Stable Cable Assembly, Using TVAC-PL360P

DC-50 GHz, 2.4mm Male to 2.4mm Male

TVAC-PL360P-24M24M-L(L:Length)

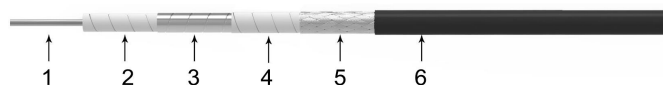


· Length can be in meter or in inch etc, e.g, TVAC-PL360P-24M24M-1M. Standard length tolerance $\pm 1.5\%$ or $\pm 5\text{mm}$ whatever is greater. Length is measured from one connector end to the other connector end as shown above.

Configuration

Connector 1	Vented 2.4mm male	Connector 2	Vented 2.4mm male
Body	Passivated stainless steel	Body	Passivated stainless steel
Center Contact	Gold plated BeCu	Center Contact	Gold plated BeCu
Cable Type	TVAC-PL360P		

Cable Construction



No.	Construction	Size (mm)	Materials
1	Center Conductor	0.72	Solid silver-plated copper
2	Dielectric	2.15	Low density PTFE
3	Outer Conductor	2.30	Silver-plated copper tape wrap
4	Interlayer	2.60	Low density PTFE
5	Outer Shield	3.05	Silver-plated copper wire braid
6	Jacket	3.60	Black FEP (ETFE available)



Electrical

Frequency	DC-50 GHz
Impedance	50 Ω
Velocity of Propagation	76%
VSWR Max	1.35
IL Max(1 meter assembly)	4dB
Temp Phase Stability	$<1300\text{ppm}(-40^{\circ}\text{C to }+85^{\circ}\text{C})$
Amplitude Stability vs Shaking	$<\pm 0.1\text{dB}$
Mechanical Phase Stability	$<\pm 5^{\circ}(\text{Wrapped } 360^{\circ} \text{ around a } 36\text{mm radius mandrel})$

Mechanical & Environmental

Min.Bending Radius Static	18mm
Min. Bending Radius Repeated	36mm
Weight	34g/m
Temperature(Operation)	$-50\sim 165^{\circ}\text{C}(\text{FEP jacket})$
Temperature(Operation)	$-50\sim 150^{\circ}\text{C}(\text{ETFE jacket})$
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-PL360P

DC-50 GHz, 2.4mm Male to 2.4mm Male

TVAC-PL360P-24M24M-L(L:Length)

Features & Benefits

- Excellent phase stability with flexure 50GHz $\leq 5^\circ$
- 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	18000	26500	40000	50000
dB/100 Meter	23.9	43.8	62.2	88.5	108.8	126.1	141.5	155.4	191.8	234.8	291.7	328.5
Avg.Power kW	0.750	0.409	0.288	0.202	0.165	0.142	0.127	0.115	0.093	0.076	0.061	0.055

Attenuation at any frequency= $[1.370735 \times \text{SQRT}(\text{FMHz})] + [0.000440 \times \text{FMHz}]$

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 0.03dB 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-PL360P-24M24M-1M)

