

# PT Series Precision Test Cables



Anoison's PT series cables (Precision test cables) are the equivalent of Gore Phase-Flex test cables with the same excellent VSWR, Phase Stability and Amplitude Stability under complex test conditions like sudden axial loading and compression loading at high frequencies up to 67GHz.

Our standard cable lengths are 26 inches and 39 inches. We also offer custom cable assemblies built to customer specifications of any length and with any configuration of connectors; Type-N through 1.85mm, male or female; NMD-style; or other appropriate standard connectors. The use of our available NMD adapters opens the option to connect VNA ports and PT test cables as well.



## Stability Specifications

Stability Cable Type	Frequency (GHz)	Phase Stability(Typ./Max.)	Amplitude Stability(Typ./Max.)
PT-18	67	±6.50°/±11.00°	±0.08dB/±0.15dB
PT-24	50	±4.95°/±9.95°	±0.06dB/±0.15dB
PT-29	40	±4.95°/±7.90°	±0.06dB/±0.15dB
PT-35	26.5	±4.95°/±7.75°	±0.06dB/±0.15dB

## Test Assembly Specifications Up to 67GHz

Stability Cable Type	PT-35		PT-29		PT-24		PT-18	
Maximum Frequency(GHz)	26.5		40		50		67	
Assembly length (inch/mm)	26/660.4	39/990.6	26/660.4	39/990.6	26/660.4	39/990.6	26/660.4	39/990.6
Typical VSWR	1.17		1.30		1.26		1.30	
Typical Insertion Loss (dB)	1.6	2.25	2.25	2.9	2.5	3.6	4.3	6.0
Impedance (Ohms)	50		50		50		50	
Velocity of Propagation	74%		74%		74%		74%	
*Phase Stability(°)(Typ./Max.)	±3.0/±4.5	±4.95/±7.75	±3.25/±4.95	±5.0/±9.6	±3.75/±6.0	±6.0/±11.8	±5.0/±9.5	±8.0/±15.6
*Amplitude Stability(dB)(Typ./Max.)	±0.05/±0.08	±0.06/±0.15	±0.05/±0.08	±0.06/±0.15	±0.04/±0.08	±0.06/±0.15	±0.05/±0.08	±0.08/±0.15

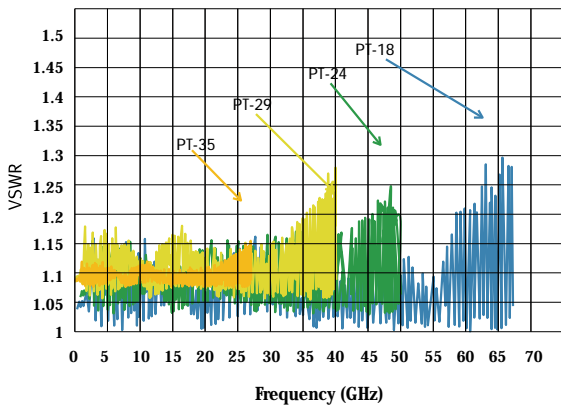
## Mechanical/Environmental Properties

Stability Cable Type	PT-35, PT-29, PT-24, PT-18
Center Conductor Material	Silver Plated Copper
Maximum Outer Diameter	0.409 in. ( 10.40 mm)
Nominal Weight	1.40 oz/ft ( 130 g/m)
Min. Static Bend Radius/ Min. Dynamic Bend Radius	1.26 in. (32 mm)/2.52 in. (64 mm)
Flex Life Cycles	>20,000
Crush Resistance	>220 lb(100 kg)
Temperature Range (°C)	-40 to +75

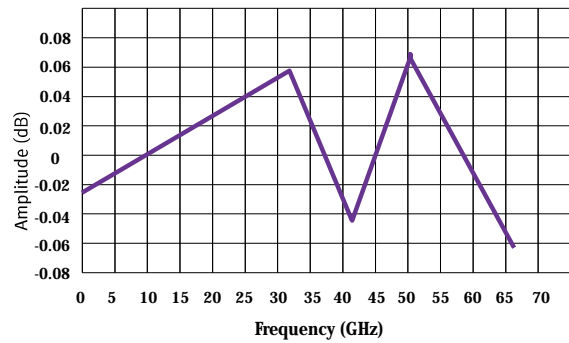
**Attenuation & Average Power (1:1 VSWR, 25 °C, Sea Level, Cable Only)**

Frequency (GHz)	PT-35		PT-29		PT-24		PT-18	
	DB/100M	W	DB/100M	W	DB/100M	W	DB/100M	W
1	36.0	500	36.0	500	43.8	409	65	220
2	51.0	370	51.0	370	62.2	288	93	200
4	73.0	260	73.0	260	88.5	202	135	120
6	90.0	210	90.0	210	108.8	165	169	85
8	104.0	180	104.0	180	126.1	142	198	75
12	129.0	150	129.0	150	155.4	115	249	65
18	160.0	120	160.0	120	191.8	93	314	50
26.5	204.79	94	204.79	94	N/A		N/A	
40	N/A		246.0	75	291.7	61	508	30
50	N/A		N/A		328.5	55	583	25
67	N/A		N/A		N/A		695	20

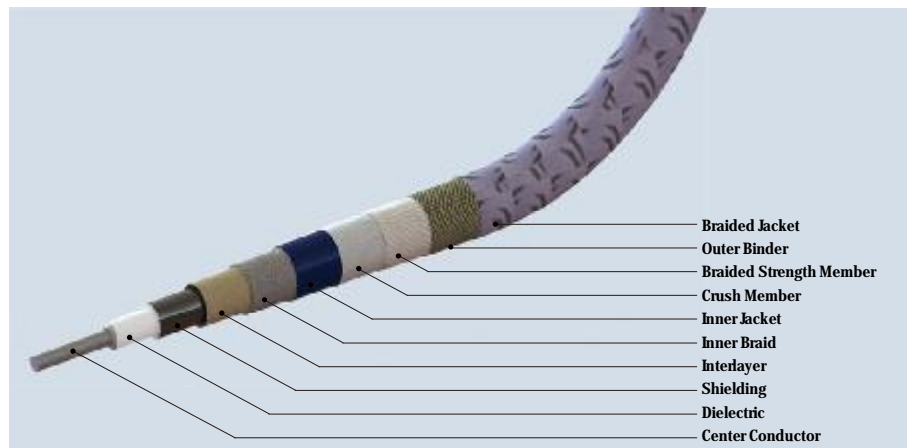
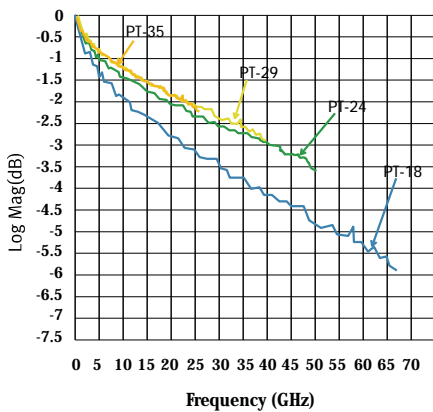
**Assembly Typical VSWR 39" Cable**



**Assembly Typical Amplitude Stability 39" Cable**



**Assembly Typical Insertion Loss 39" Cable**



### Ordering Information for Test Assemblies

P/N	Frequency (GHz)	VSWR (Typ./Max.)	Typical IL(dB)	Phase Stability (Typ./Max.) vs. Flexure( °)	Amplitude Stability (Typ./Max.) vs. Flexure(dB)	L(inch)
PT-18M-18M-26	67	1.40/1.50	5.3	±5.0/±9.5	±0.06/±0.10	26
PT-18M-18F-26						
PT-18F-18F-26						
PT-18M-18M-39			7.5	±6.5/±11	±0.08/±0.15	39
PT-18M-18F-39						
PT-18F-18F-39						
PT-24M-24M-26	50	1.30/1.40	4.6	±3.75/±5.25	±0.04/±0.08	26
PT-24M-24F-26						
PT-24F-24F-26						
PT-24F-18M-26						
PT-24M-24M-39			6.5	±4.95/±9.95	±0.06/±0.15	39
PT-24M-24F-39						
PT-24F-24F-39						
PT-24F-18M-39						
PT-29M-29M-26	40	1.25/1.35	2.4	±3.25/±4.95	±0.04/±0.08	26
PT-29M-29F-26						
PT-29M-24F-26						
PT-29M-18F-26						
PT-29F-29F-26						
PT-29M-29M-39			3.4	±4.95/±7.90	±0.06/±0.15	39
PT-29M-29F-39						
PT-29M-24F-39						
PT-29M-18F-39						
PT-29F-29F-39						
PT-35M-35M-26	26.5	1.25/1.30	2.1	±3.5/±4.5	±0.04/±0.08	26
PT-35M-35F-26						
PT-35M-29F-26						
PT-35M-24F-26						
PT-35F-35F-26						
PT-35M-35M-39			2.9	±3.5/±4.5	±0.06/±0.15	39
PT-35M-35F-39						
PT-35M-24F-39						
PT-35F-35F-39						
PT-35M-29F-39						

## NMD Adapter Available

CONNECTOR2 \ CONNECTOR1	3.5mm	2.92mm	2.4mm	1.85mm
NMD3.5	•	•	•	
NMD2.92	•	•	•	
NMD2.4		•	•	
NMD1.85		•	•	•

## Ordering Information for NMD Adapters

P/N	CONNECTOR1	CONNECTOR2	FREQUENCY	VSWR
PA6962C	NMD1.85 F	1.85mm F	DC~67GHz	1.35 MAX.
PA6922C	NMD1.85 F	2.4mm F	DC~50GHz	1.25 MAX.
PA6929C	NMD1.85 F	2.92mm F	DC~40GHz	1.20 MAX.
PA6822C	NMD2.4 F	2.4mm F	DC~50GHz	1.25 MAX.
PA6829C	NMD2.4 F	2.92mm F	DC~40GHz	1.20 MAX.
PA6422C	NMD2.92 F	2.4mm F	DC~40GHz	1.20 MAX.
PA6429C	NMD2.92 F	2.92mm F	DC~40GHz	1.20 MAX.
PA6425C	NMD2.92 F	3.5mm F	DC~26.5GHz	1.15 MAX.
PA7122C	NMD3.5 F	2.4mm F	DC~26.5GHz	1.15 MAX.
PA7129C	NMD3.5 F	2.92mm F	DC~26.5GHz	1.15 MAX.
PA7125C	NMD3.5 F	3.5mm F	DC~26.5GHz	1.15 MAX.

## Mechanical/Environmental Properties

Center Conductor Material	Stainless Steel, Passivated
Outer Conductor Material	Beryllium Copper Alloy, Gold Plated
Insulator	PEI
Reconnended Torque	Connector 1: 1.35~2 NM Connector 2: 0.9 NM
Mechanical Durability	2000 Cycles MIN.
Temperature Range	-55 C ~+125 C