

## Phase-stable Test Cable



- **Product Description**

The microwave test cable is a durable and cost-effective testing solution, widely used in various testing scenarios and system interconnections due to its excellent performance. It features an ultra-stable cable design and wear-resistant stainless steel connectors, allowing for prolonged and stable connection cycles. This makes it especially suitable for use in production lines, laboratories, and field environments. Moreover, this test cable is also

highly competitive when applied in system interconnection applications.

- **Product features**

Ultra durability、 High cost-performance ratio、 Suitable for direct outdoor use、 Excellent shielding performance、 Amplitude and phase stability、 Various armor protection options available、 Frequency DC-26.5GHz、 More mating cycles with wear-resistant stainless steel

- **Part Number**

MP-IP-GLXXXX-XXXX-XX

- **Application area**

R&D Laboratory / Anechoic Chamber、 Mass Production Testing、 Device Environmental Testing、 Large-scale OEM Manufacturing、 On-site Fault Detection、 Wireless Communication Metrology Testing、 Interconnection of Various Frequency Instruments、 Cabinet-to-Cabinet Interconnection

- **Core parameters**

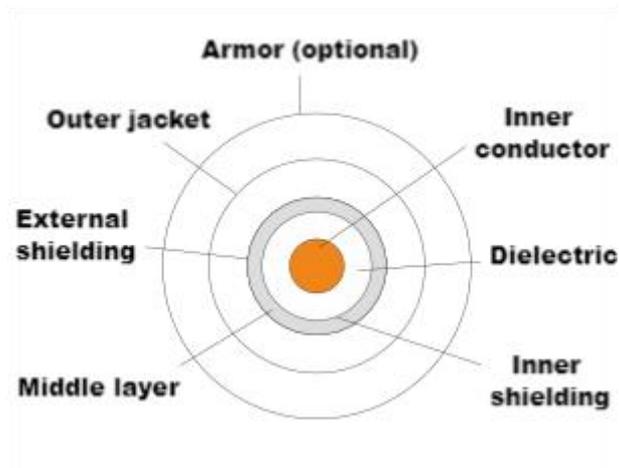
Frequency Band	Shielding efficiency
Up to 26.5GHz	>100dB



- **General Parameters**



## Cable Construction:



### Cable Construction:

**Inner Conductor:** Silver-plated copper-clad steel

**Dielectric:** PTFE

**Inner Shielding:** Silver-plated copper tape

**Middle Layer:** High-temperature aluminum foil

**Outer Shielding:** Silver-plated copper wire



**Outer Jacket: FEP**

**Optional Reinforced Armor Protection:**

**Transparent, Stainless Steel, Black Spring Net**

**Connector Advantages:**

**304 stainless steel housing**

**Beryllium copper center pin with robust structural design**

**Excellent wear resistance**

**Over 5,000 mating cyclest**

<b>Physical and mechanical parameters</b>	
<b>Dimensions</b>	<b>mm</b>
<b>Inner conductor</b>	<b>0.94</b>
<b>Dielectric</b>	<b>2.97</b>
<b>Inner shield</b>	<b>3.17</b>
<b>Middle layer</b>	<b>3.31</b>
<b>Outer shield</b>	<b>3.82</b>
<b>Outer jacket</b>	<b>4.95</b>
<b>Armor (optional)</b>	<b>A Transparent 10mm/S Stainless Steel 8.7/B Black 10mm (3 types)</b>
<b>Weight</b>	<b>0.064Kg/m(cable)</b>
<b>Armor compression resistance</b>	<b>100kg(A)/ 60Kg(S) /80Kg(B)</b>
<b>Minimum bending radius</b>	<b>20(mm)</b>



<b>Number of plugging and unplugging times</b>	<b>&gt;5000</b>
<b>Length tolerance</b>	<b>+/-5mm</b>
<b>Temperature range</b>	<b>-55°C/+125°C</b>

<b>Electrical properties</b>					
<b>VSWR(Max)</b>		<b>3Ghz</b>	<b>6Ghz</b>	<b>18Ghz</b>	<b>26.5Ghz</b>
	<b>SMA 3.5mm</b>	<b>1.07</b>	<b>1.10</b>	<b>1.20</b>	<b>1.25</b>
	<b>N 3.5NMD</b>	<b>1.10</b>	<b>1.15</b>	<b>1.25</b>	
	<b>BNC</b>	<b>1.15</b>			
<b>Impedance</b>	<b>50Ω</b>				
<b>Propagation rate</b>	<b>70%</b>				
<b>Shielding efficiency</b>	<b>&gt;100dB</b>				
<b>Capacitance</b>	<b>96.41pf/Meter</b>				
<b>Mechanical phase stability</b>	<b>DC-10Ghz 1° 10-18Ghz 2°</b>				
<b>Amplitude stability</b>	<b>DC-26Ghz 0.05dB</b>				
<b>Phase matching</b>	<b>Can be customized according to customers</b>				

<b>Mating connector type</b>		
<b>Connector type</b>	<b>abbreviation</b>	<b>Operating frequency</b>
<b>SMA Male</b>	<b>SM</b>	<b>DC-26.5GHz</b>
<b>3.5mm Male</b>	<b>3M</b>	<b>DC-27GHz</b>
<b>SMA Female</b>	<b>SF</b>	<b>DC-26GHz</b>
<b>3.5mm Female</b>	<b>3F</b>	<b>DC-27GHz</b>
<b>N Male</b>	<b>NM</b>	<b>DC-18GHz</b>

Mating connector type		
Connector type	abbreviation	Operating frequency
N Female	NF	DC-18GHz
3.5NMD	35NMD	DC-27GHz



**Connector structure**

**Center conductor: Beryllium**

**copper with gold plating**

**Dielectric body: PT FE**

**Welding cup: Split optimized**

**welding cup**

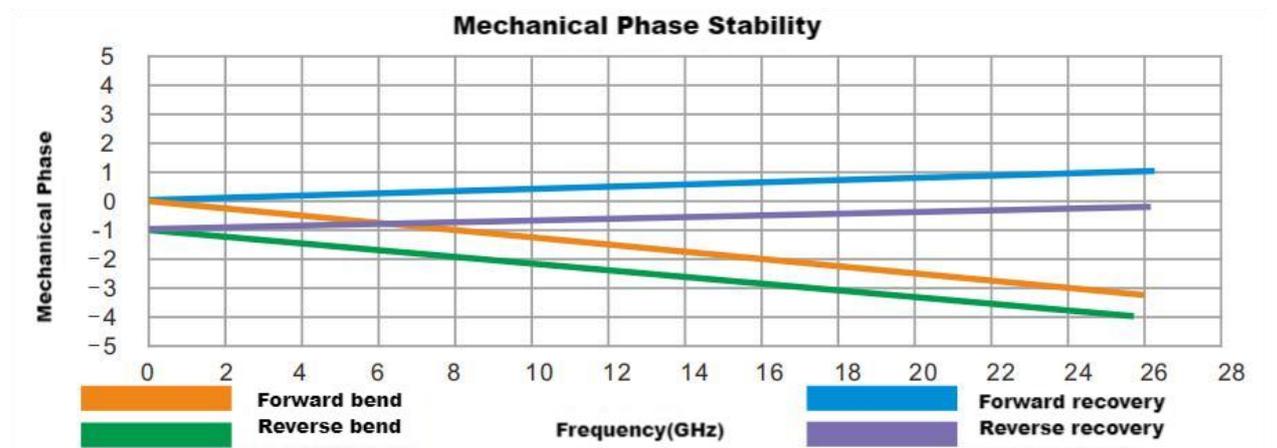
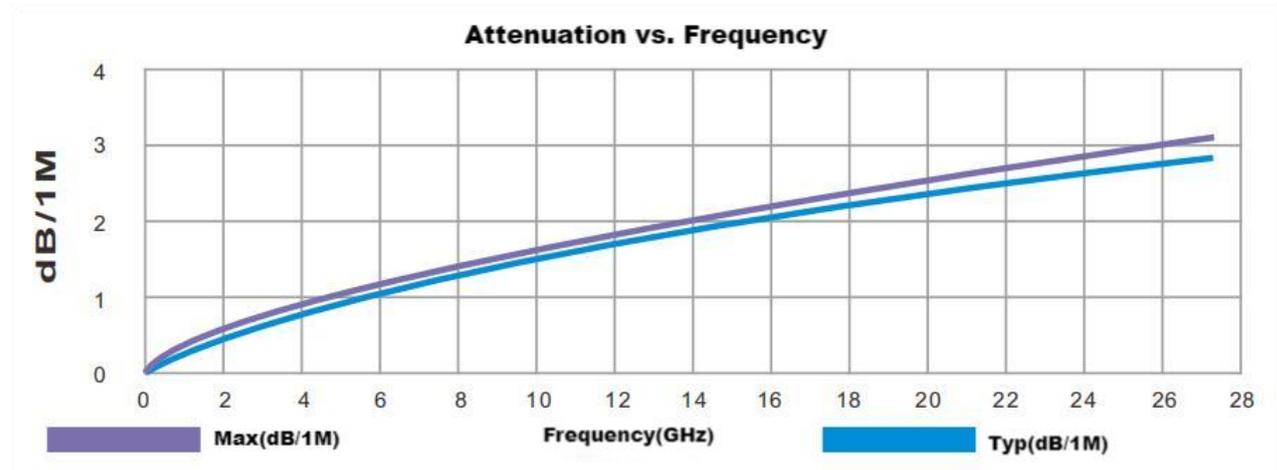
**Outer conductor: Stainless steel**

**passivation**

**Nut: Stainless steel passivation**



## Cable assembly including connector loss at both ends



	<p><b>Option: 2.92mm/2.4mm/1.85mm NMD network dedicated protection head</b></p>
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## Low loss series

	<p><b>Connector structure</b></p> <p><b>Center conductor: beryllium copper with gold plating</b></p> <p><b>Dielectric body: PTFE</b></p> <p><b>Welding cup: split optimized welding cup</b></p> <p><b>Outer conductor: stainless steel passivation</b></p> <p><b>Nut: stainless steel passivation</b></p>
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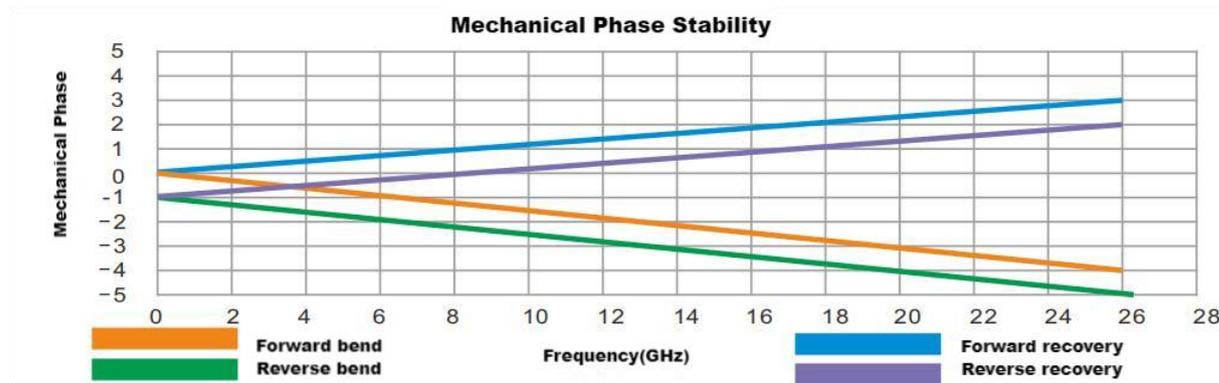
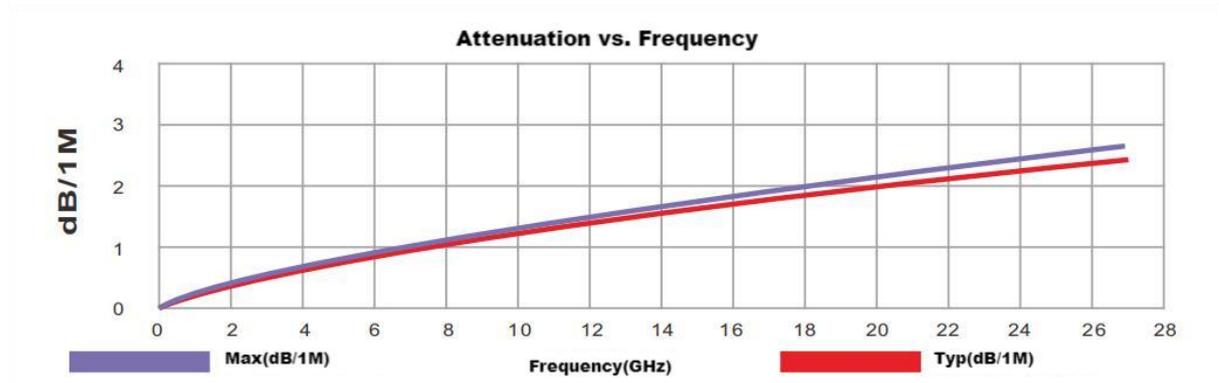
Physical and mechanical parameters	
<b>Dimensions</b>	<b>mm</b>
<b>Inner conductor</b>	<b>1.02</b>
<b>Dielectric</b>	<b>3.05</b>

Inner shield	3.32
Middle layer	3.45
Outer shield	4 .02
Outer sheath	4 .65
Armor (optional)	Transparent/Stainless steel/Black (3 types)
Weight (kg/m)	0.050
Armor compression resistance	100kg( P) 60Kg(S) 120 Kg( B)
Minimum bending radius	18(mm)
Number of plugging and unplugging	>5000
Length tolerance	+/-5mm
Temperature range	-55 °C/+125 °C

Electrical properties					
VSWR(max)		3Ghz	6Ghz	18Ghz	26.5Ghz
	SMA 3.5mm	1 .07	1.1	1 .2	1 .25
	N 3.5 NMD	1.1	1 .15	1 .25	
	BNC	1 .15			
Impedance	50 Ω				
Propagation rate	76%				
Shielding efficiency	>110dB				
Capacitance	96.41pf/ Meter				
Mechanical phase stability	DC-10Ghz 1 .1 ° 10-18Ghz 2 °				



Amplitude stability	DC-26Ghz 0.05dB
Phase matching	Can be customized according to customers



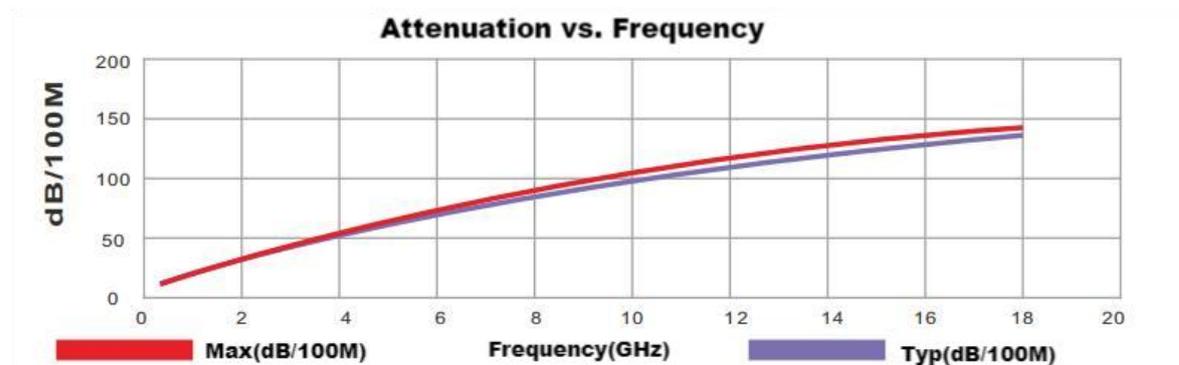
## Super soft series

Physical and mechanical parameters	
Dimensions	mm
Inner conductor	1.45
Dielectric	4.23
Inner shield	4.37



Outer shield	4.77
Outer sheath	5.50
Weight (kg/m)	0.065
Minimum bending radius	28(mm)
Temperature range	-55~+85 °C

Electrical properties					
		3Ghz	6Ghz	18Ghz	26.5GHz
VSWR(max)	SMA 3.5mm	1.07	1.20	1.25	1.3
	N 3.5NMD	1.1	1.20	1.30	
	BNC	1.15			
Impedance		50 Ω			
Propagation rate		77%			
Shielding efficiency		>90dB			
Dielectric withstand voltage		1500(V, DC)			



	<p><b>Connector structure</b></p> <p><b>Center conductor: beryllium copper with gold plating</b></p> <p><b>Dielectric body: PT FE</b></p> <p><b>Welding cup: split optimized welding cup</b></p> <p><b>Outer conductor: stainless steel passivation</b></p> <p><b>Nut: stainless steel passivation</b></p>
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Frequency MHz	300	1000	2000	4000	6000	8000	1000	1200	1350	1400	1600	1800
							0	0	0	0	0	0
Attenuation dB/100 m	15.9	29.2	41.7	59.6	73.6	85.6	96.4	106.2	113.0	115.3	123.8	131.9
Average power kW	0.10	0.05	0.03	0.02	0.02	0.01	0.017	0.015	0.014	0.014	0.013	0.012
<p><b>K=10.9055116    K2=0.0005800    Calculation formula=K1*v FMHz+K2*FMHz</b></p>												



## Ordering Info

