MFW1™ Series

Ultra Low loss test cable

MICROWAVE FARM

Microwave Farm's MFW1 Series are complete line of high performance flexible microwave cable assemblies. The MFW1 have extruded **Low density PTFE dielectric** structure to allow low dielectric constant as close as air up to 1.3 and achieve fast velocity propagation of **83 %**.

MFW1 Series have the lowest insertion loss available to **18, 26.5, 35 and 40 GHz**.
These low loss cable assemblies are extremely versatile, moderately priced and fit a variety of applications.

Features

- Center Conductor : Silver Plated Copper
- Dielectric core : LD PTFE
- Outer Conductor : Silver Plated Copper Ribbon
- Outer Shield : Silver Plated Copper

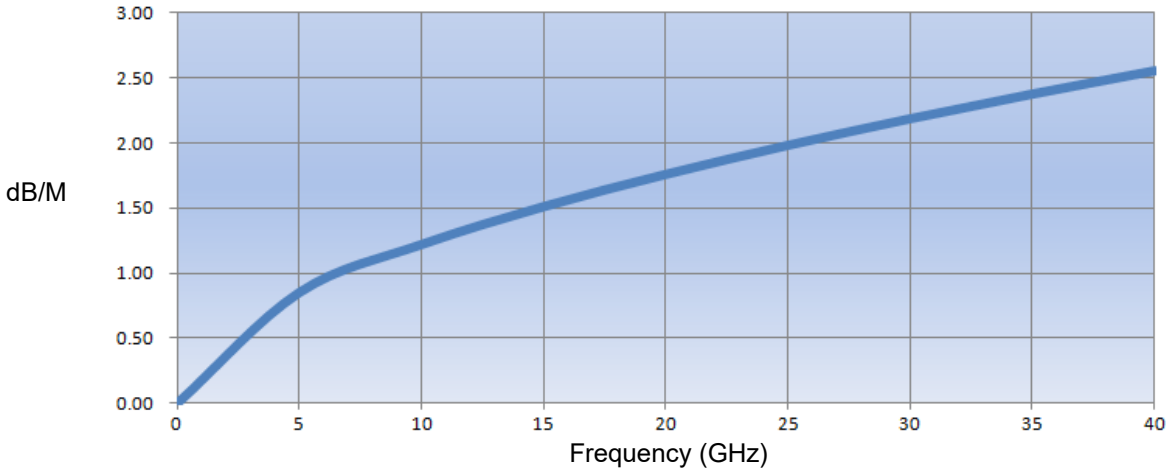
Specification

Scope	Specification	MFW100	MFW101	MFW102
Physical	Center Conductor	0.91	1.45	2.30
	Dielectric	2.50	4.00	6.20
	Outer Conductor	2.66	4.20	6.55
	Outer Shield	3.15	4.70	7.10
	Jacket	3.60	5.10	7.80
Electrical	Impedance(Ohm)		50	
	Operation Freq.(GHz)	40	26.5	18
	Velocity of Propagation(%)		83	
	Shielding Effectiveness(dB)		90	
	Voltage Withstand(V,DC)	1,000	1,500	2,000
Mechanical & Environmental	Weight (g/M)	33	50	130
	Bending Radius : Installation (mm)	18	20	35
	Repeated (mm)	36	50	80
	Mechanical Phase		± 5°	
	Temperature (Operating)		-55 ~+165℃	
	Temperature (Storage)		-65 ~+165℃	

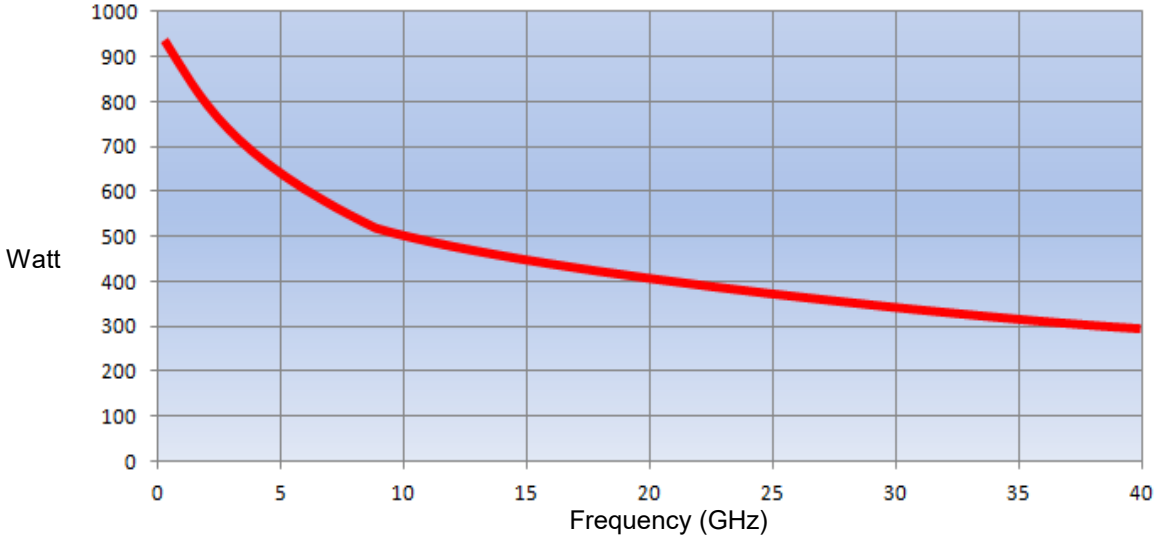
Info@takitek.com
www.takitek.co.jp

MFW100 (40 GHz)

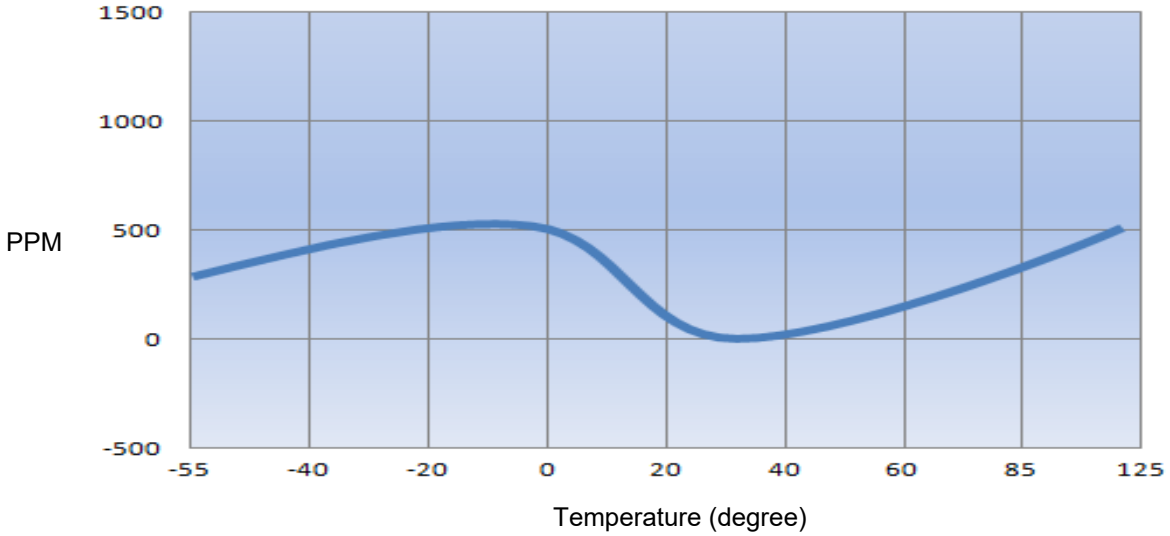
Cable Attenuation (Nominal Values @ +25 ℃ Ambient temperature)



Power Handling (Maximum Values @ +40 ℃ Ambient temperature & Sea level)

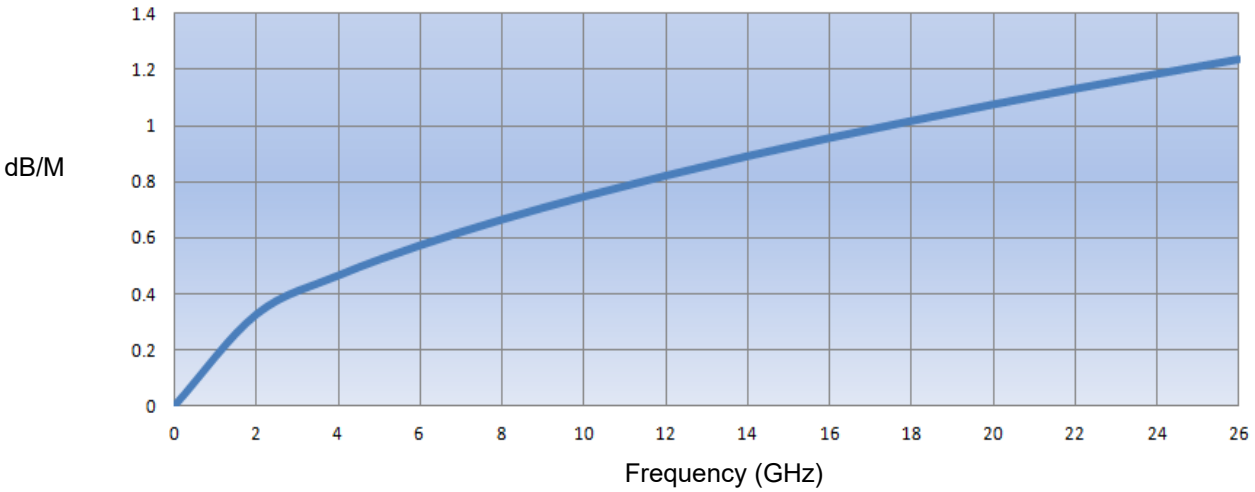


Typical Phase change

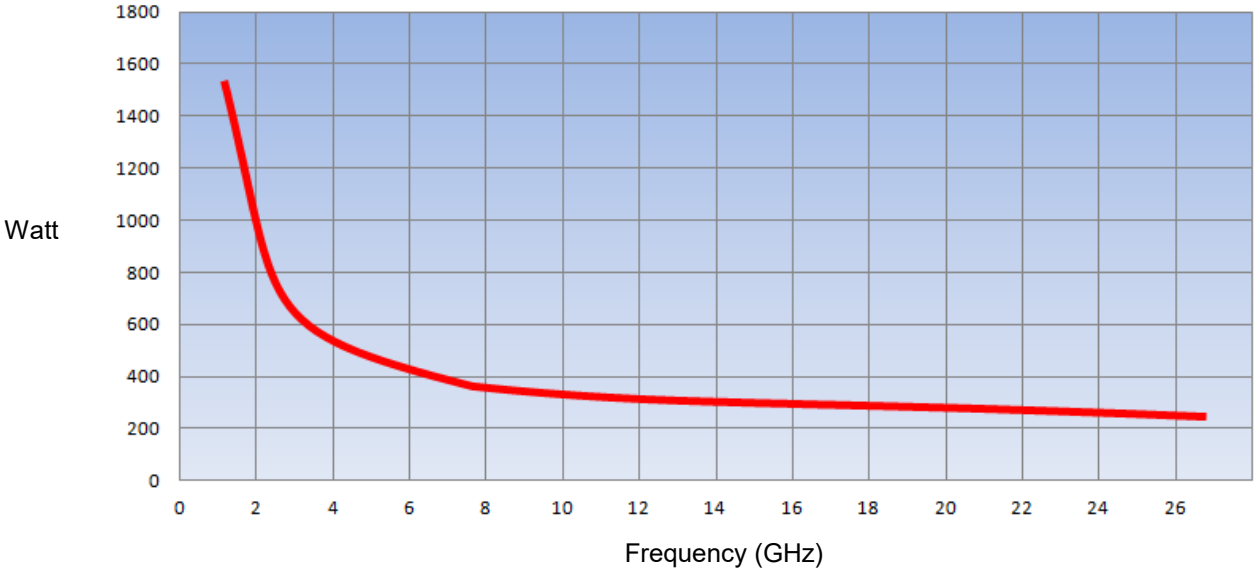


MFW101 (26.5 GHz)

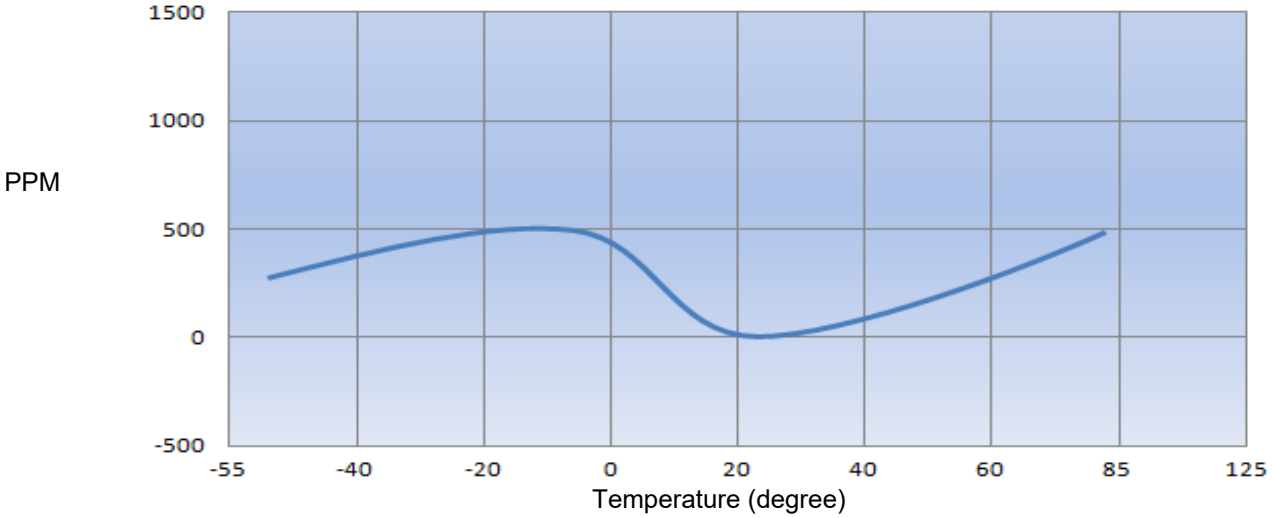
Cable Attenuation (Nominal Values @ +25 ℃ Ambient temperature)



Power Handling (Maximum Values @ +40 ℃ Ambient temperature & Sea level)

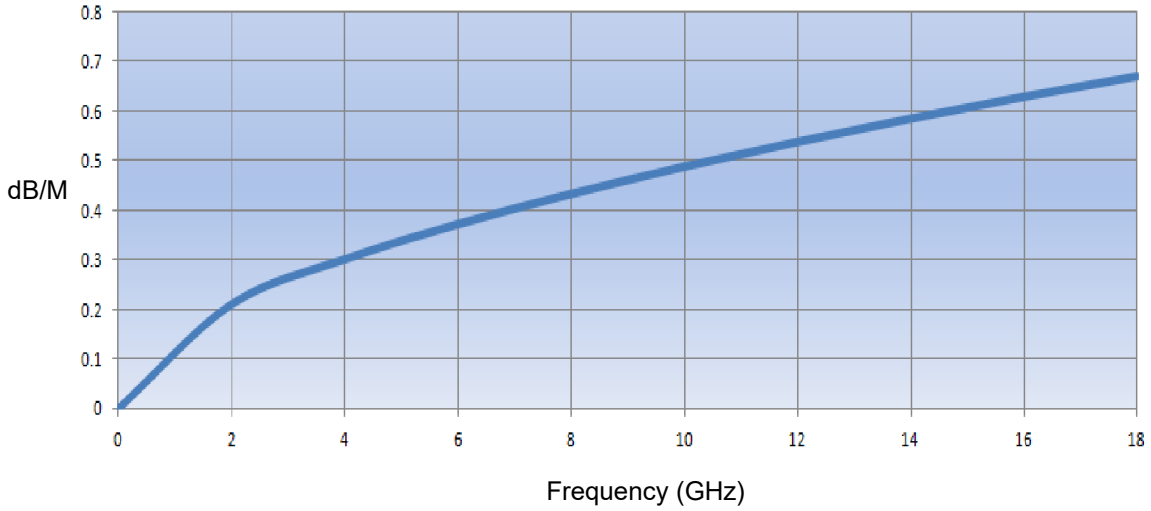


Typical Phase change vs Temperature

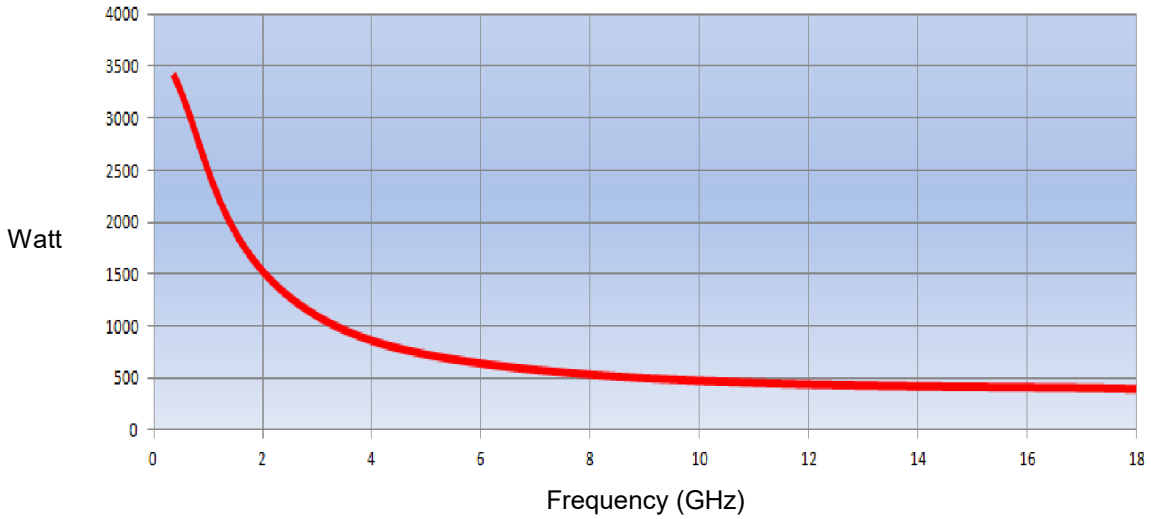


MFW102 (18 GHz)

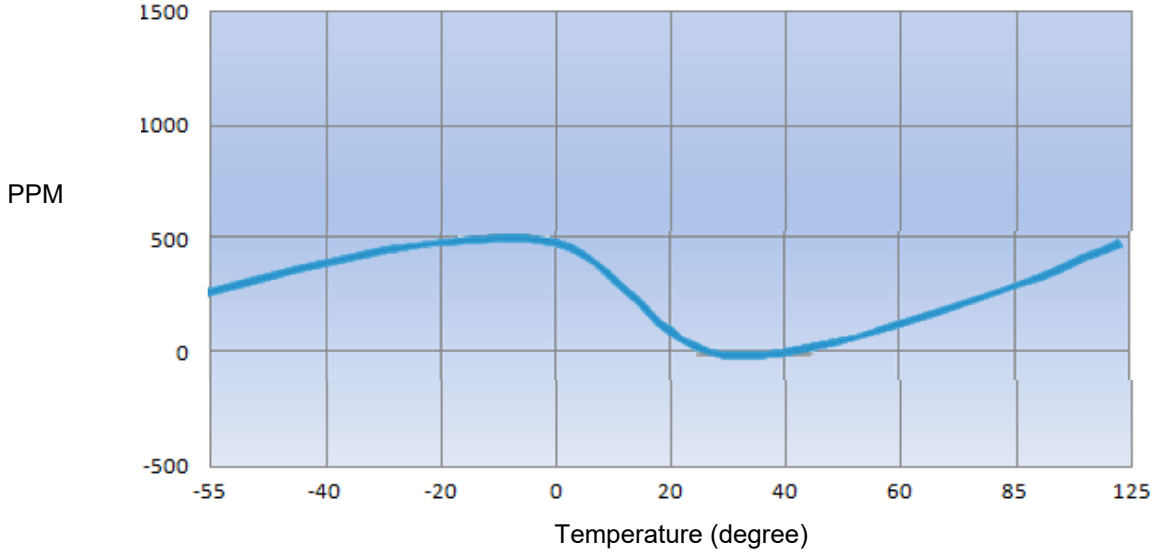
Cable Attenuation (Nominal Values @ +25 ℃ Ambient temperature)



Power Handling (Maximum Values @ +40 ℃ Ambient temperature & Sea level)



Typical Phase change

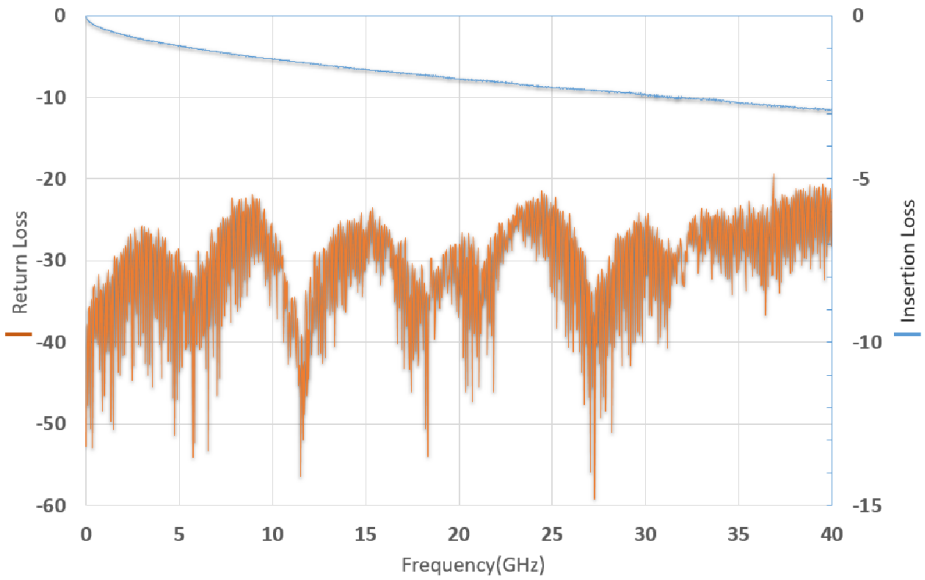


Test Result

MFW100 cable Assembly

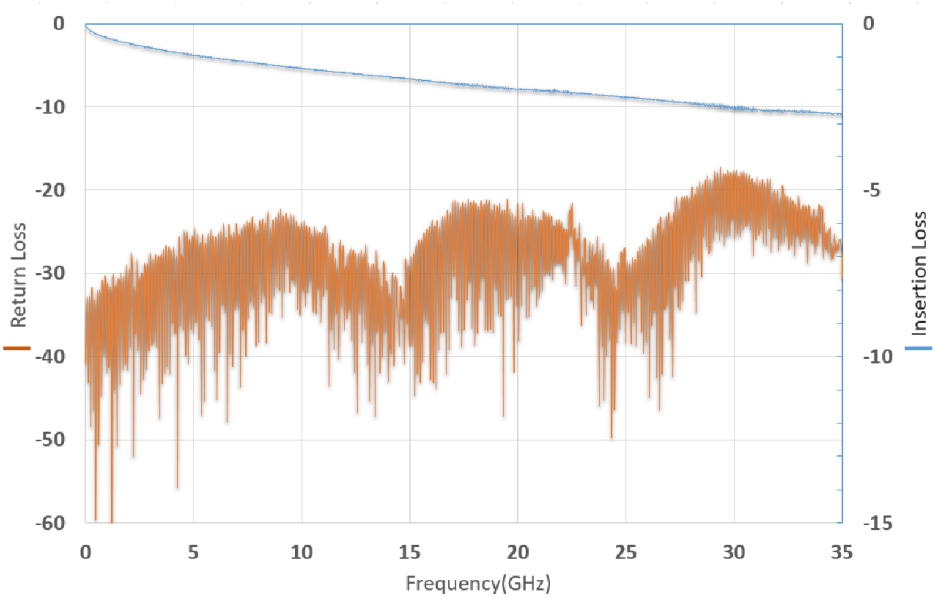
Part No: MFW100-KM1KM1-1M

- Frequency : DC to 40 GHz
- Connector : 2.92 mm(Male)
- Cable Length : 1 meter



Part No: MFW100-3M13M1-1M

- Frequency : DC to 35 GHz
- Connector : 3.5 mm(Male)
- Cable Length : 1 meter

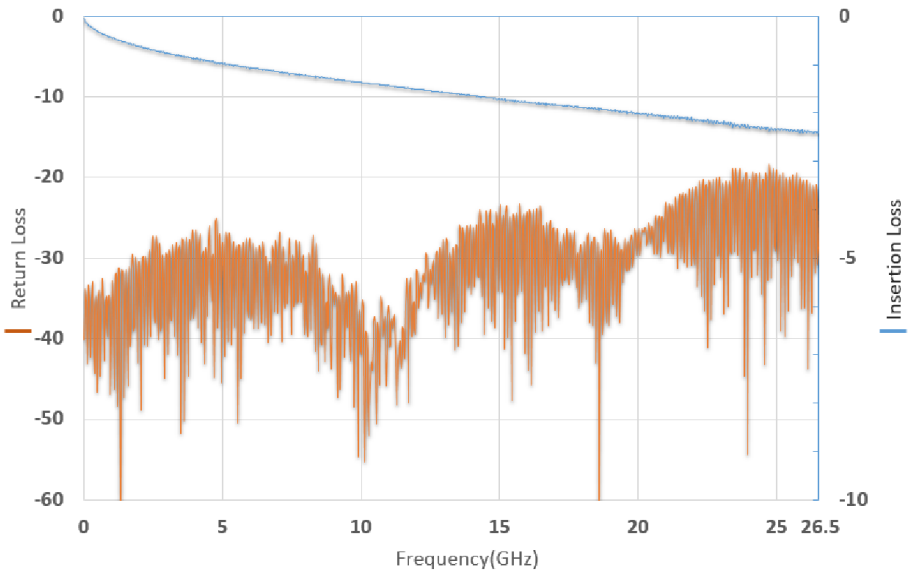


Test Result

MFW100 cable Assembly

Part No: MFW100-SM1SM1-1M

- Frequency : DC to 26.5 GHz
- Connector : SMA (Male)
- Cable Length : 1 meter

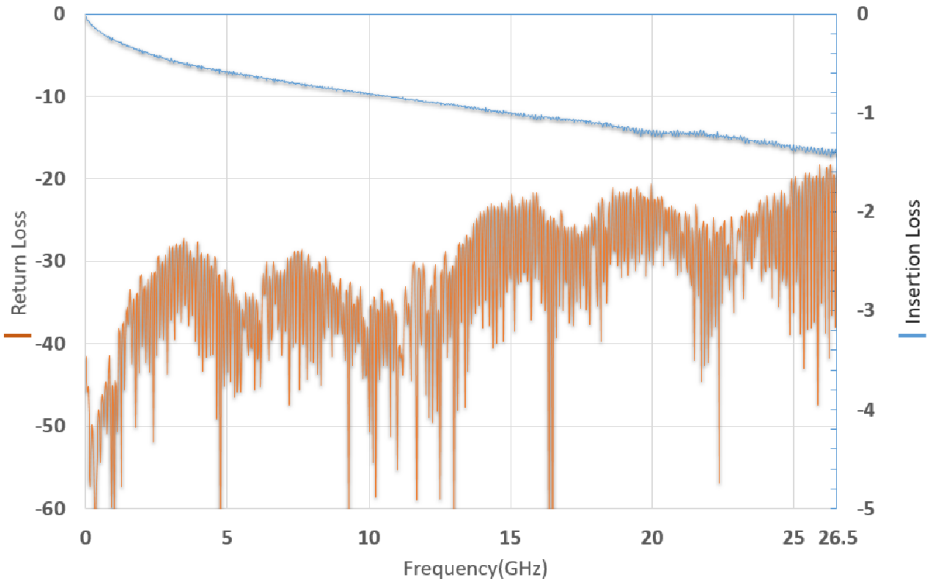


Test Result

MFW101 cable Assembly

Part No: MFW101-SM1SM1-1M

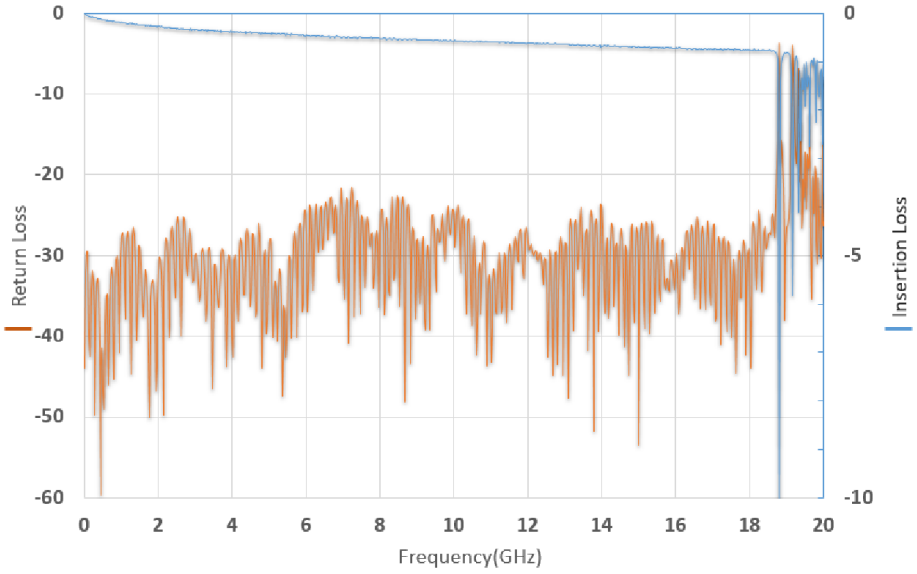
- Frequency : DC to 26.5 GHz
- Connector : SMA (Male)
- Cable Length : 1 meter



MFW102 cable Assembly

Part No: MFW102-SM1SM1-1M

- Frequency : DC to 18 GHz
- Connector : SMA (Male)
- Cable Length : 1 meter



Selection Guide

MFW100 – KM1KM1 - 1M – 2PS

Phase Matching

2PS: ± 2 pico-second
5PS: ± 5 pico-second
10PS: ± 10 pico-second

Cable Type

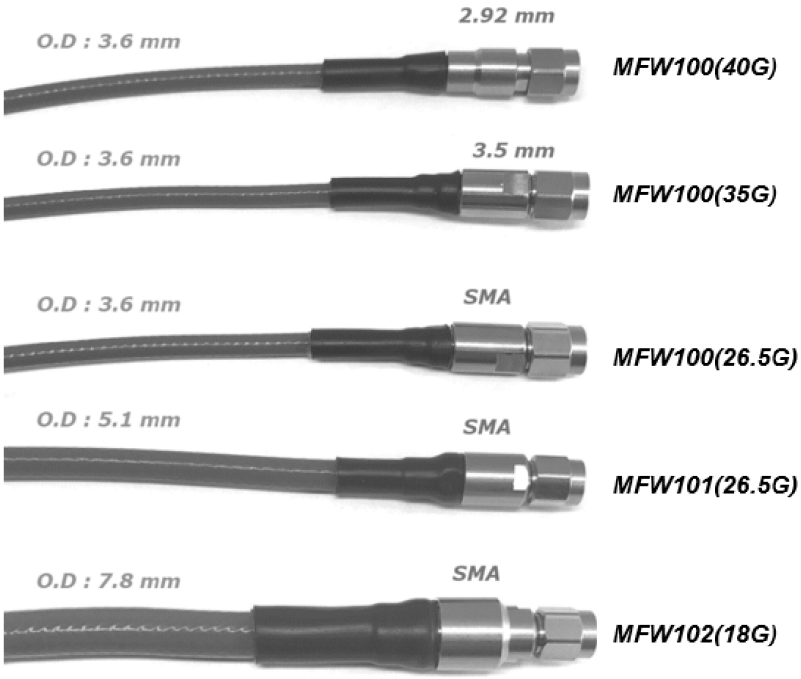
MFW100
MFW101
MFW102

Connector Type

SM1 : SMA Male
3M1 : 3.5 mm Male
KM1 : 2.92 mm Male
NM1 : N-type Male

Cable Length

Unit : Meter



MFW100(40G): Armor type