

**W1 Series** are complete line of high performance flexible microwave cable assemblies.  
The W1 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 %**.

W1 Series have the lowest insertion loss available to **18, 26.5, 35, 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

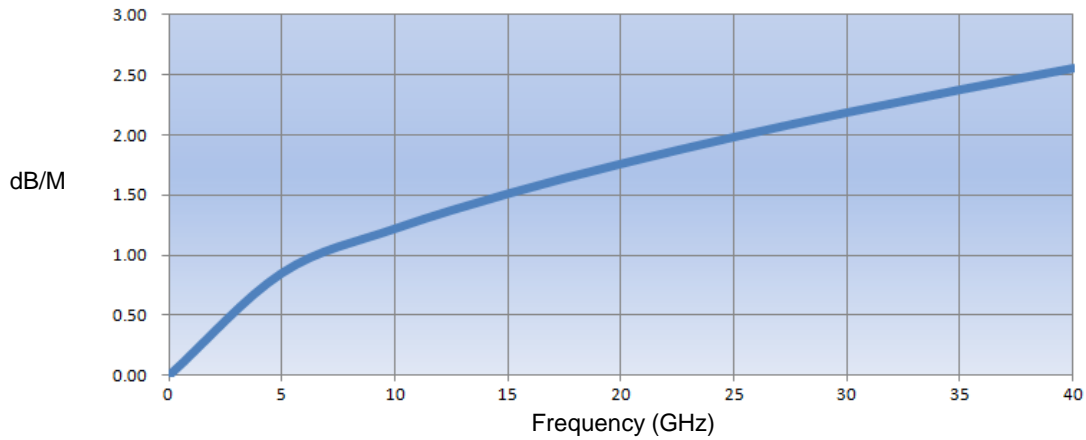


### ■ Specification

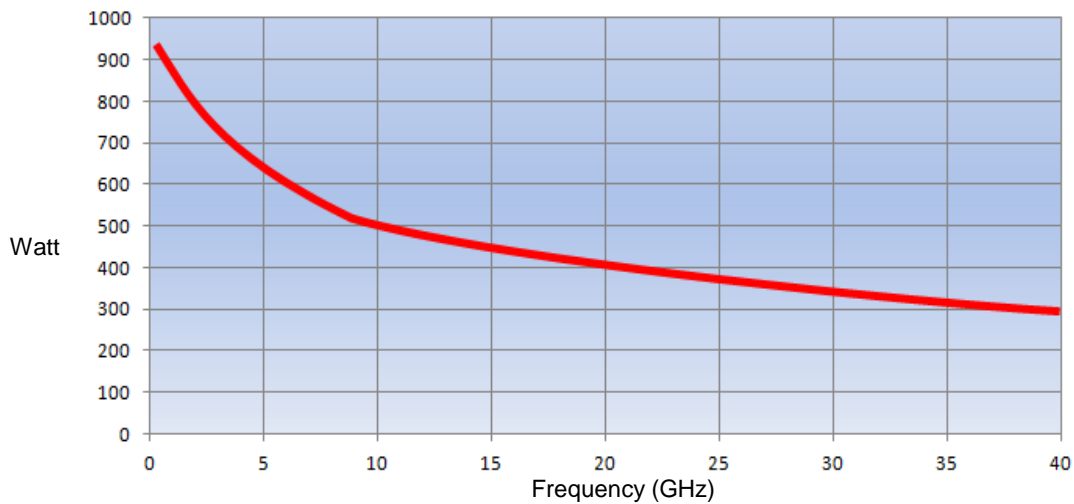
Scope	Specification	W100	W101	W102
Physical	Center Conductor	0.91	1.45	2.30
	Dielectric	2.50	4.00	6.30
	Outer Conductor	2.66	4.20	6.60
	Outer Shield	3.15	4.70	7.11
	Jacket	3.60	5.10	7.80
Electrical	Impedance(Ohm)		50	
	Operation Freq.(GHz)	40	26.5	18
	Velocity of Propagation(%)		83	
	VSWR (Max)		<1.3	
	Shielding Effectiveness(dB)		<-90	
	Voltage Withstand(V,DC)	1,000	1,500	2,000
Mechanical & Environmental	Weight (g/M)	33	50	146
	Bending Radius : Installation (mm)	18	25.5	39
	Repeated (mm)	33	65	78
	Temperature (Operating)		-55 ~+165°C	

**W100 (40 GHz)**

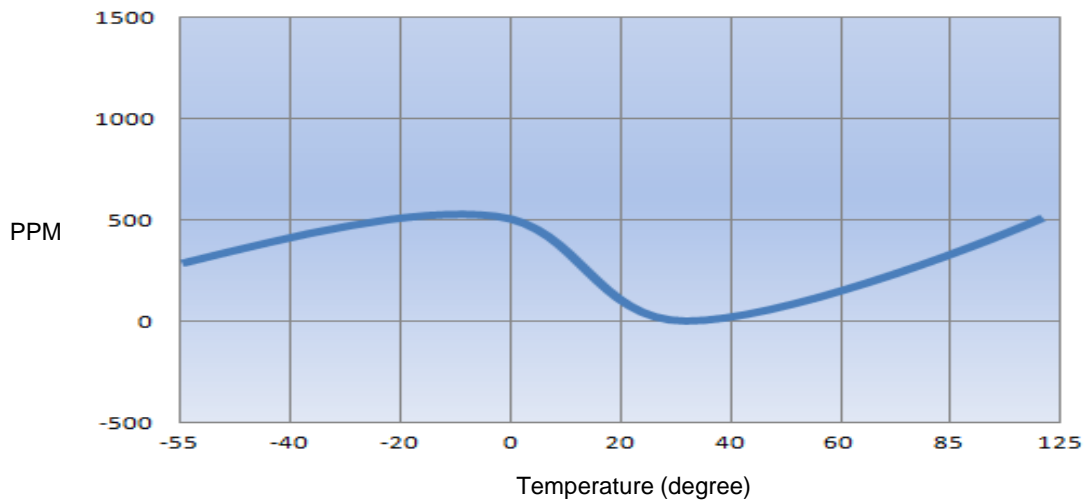
**Cable Attenuation (Nominal Values @ +25 °C Ambient temperature)**



**Power Handling (Maximum Values @ +40 °C Ambient temperature & Sea level)**

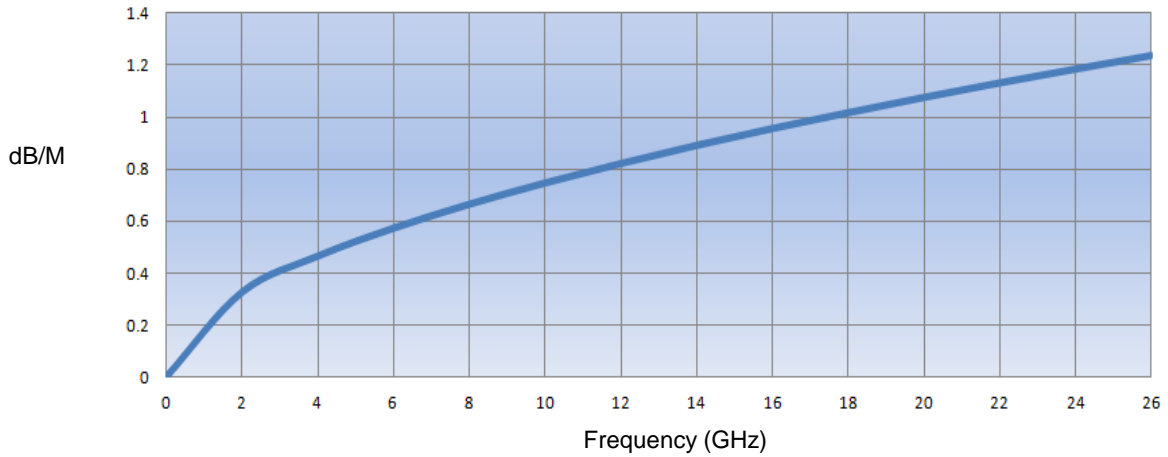


**Typical Phase change**

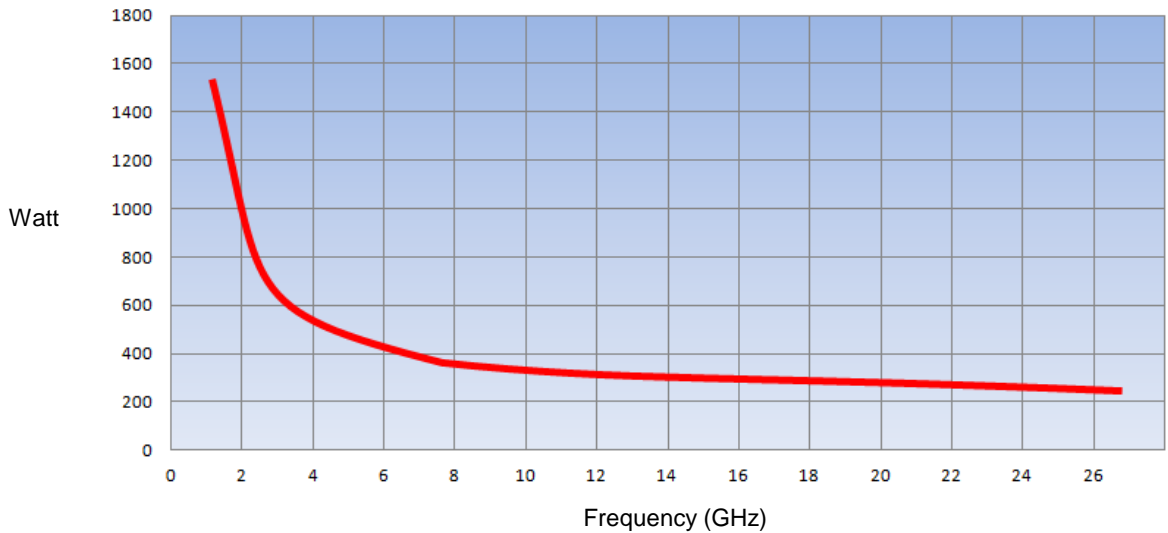


■ **W101 (26.5 GHz)**

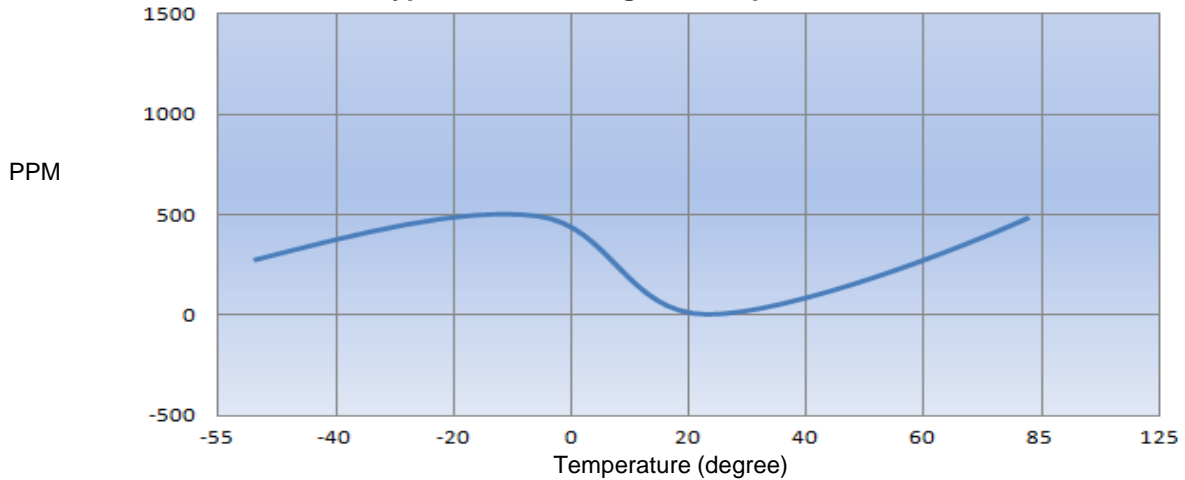
**Cable Attenuation (Nominal Values @ +25 °C Ambient temperature)**



**Power Handling (Maximum Values @ +40 °C Ambient temperature & Sea level)**

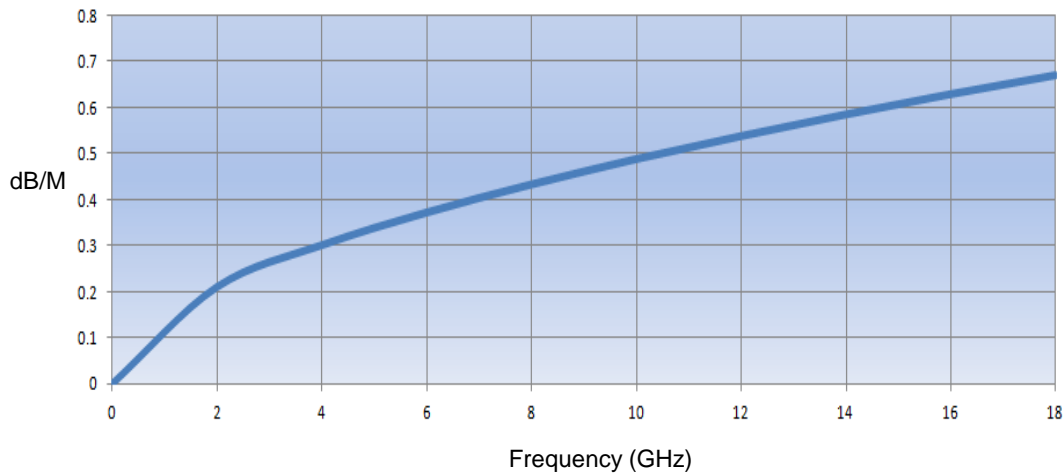


**Typical Phase change vs Temperature**

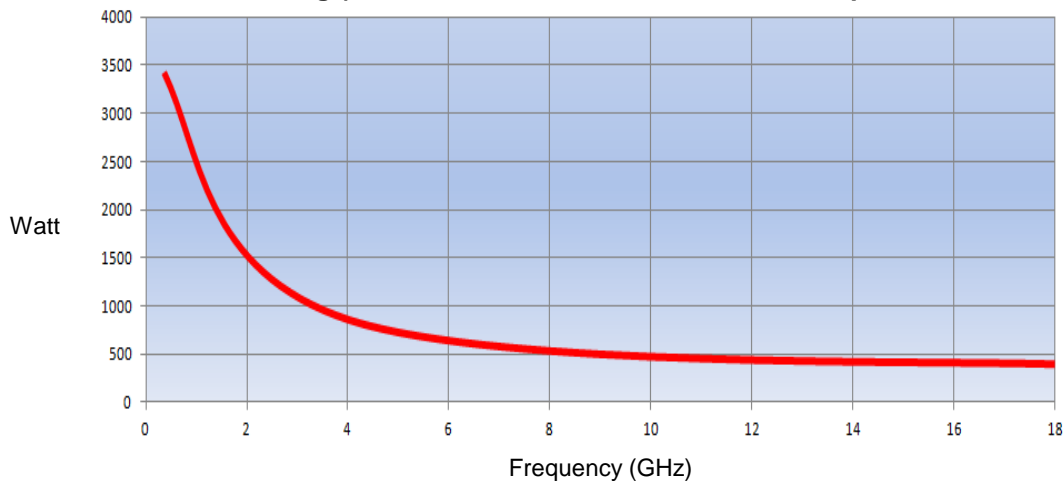


**W102 (18 GHz)**

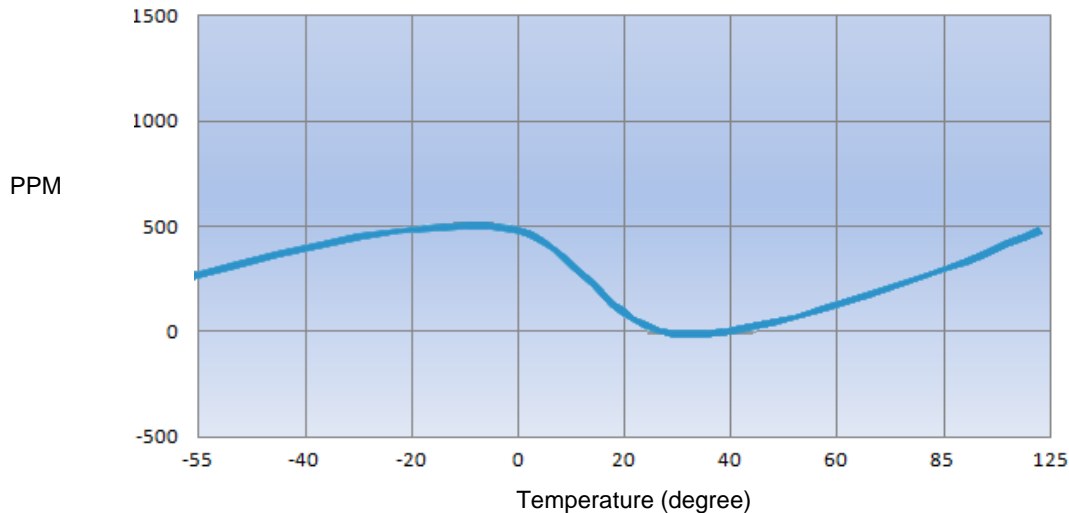
**Cable Attenuation (Nominal Values @ +25 °C Ambient temperature)**



**Power Handling (Maximum Values @ +40 °C Ambient temperature & Sea level)**



**Typical Phase change**

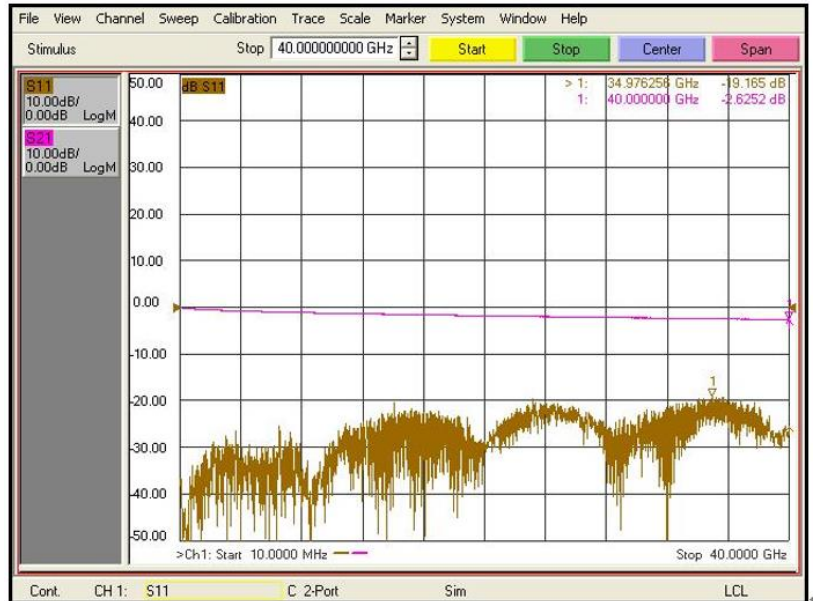


**Test Result**

**W100 cable Assembly**

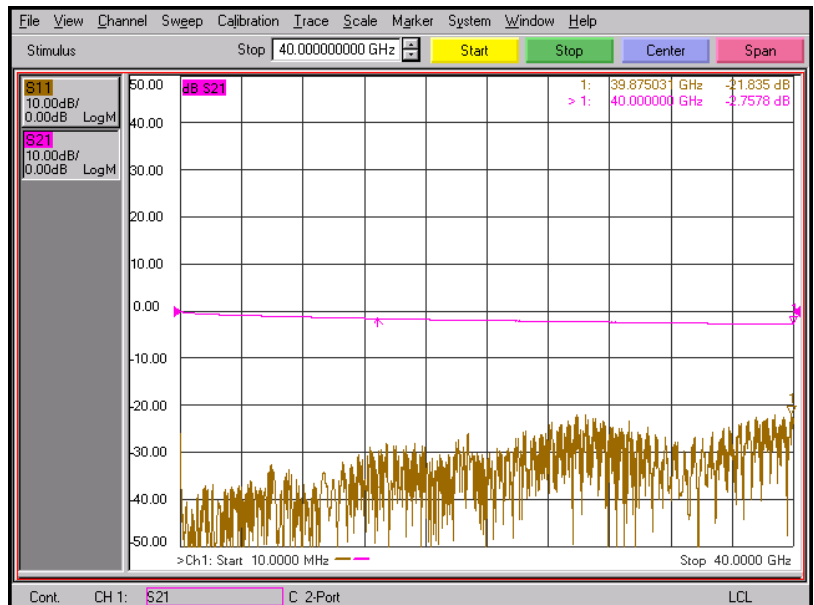
**Part No: W100-KM1KM1-1M**

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



**Part No: W100-KF1KF1-1M**

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

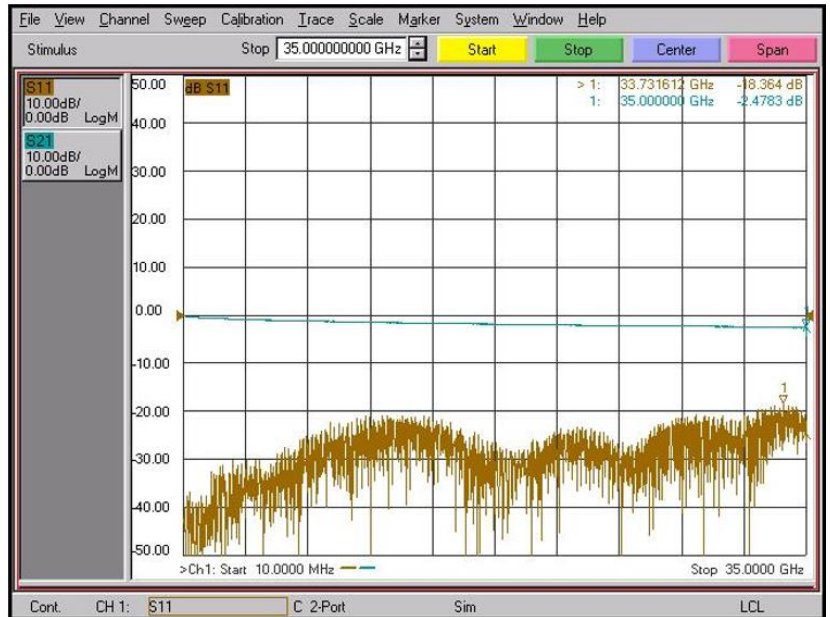


**Test Result**

**W100 cable Assembly**

**Part No: W100-3M13M1-1M**

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



**Part No: W100-SM1SM1-1M**

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

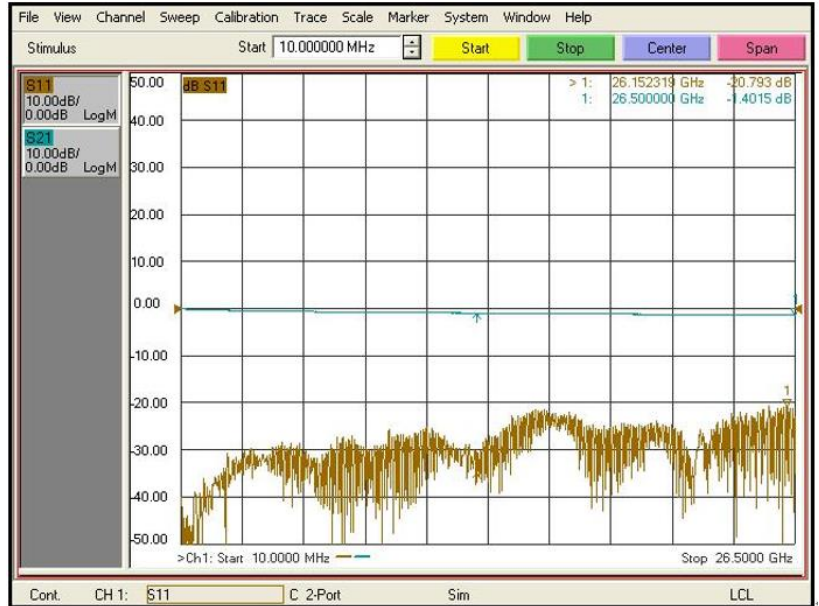


■ **Test Result**

**W101 cable Assembly**

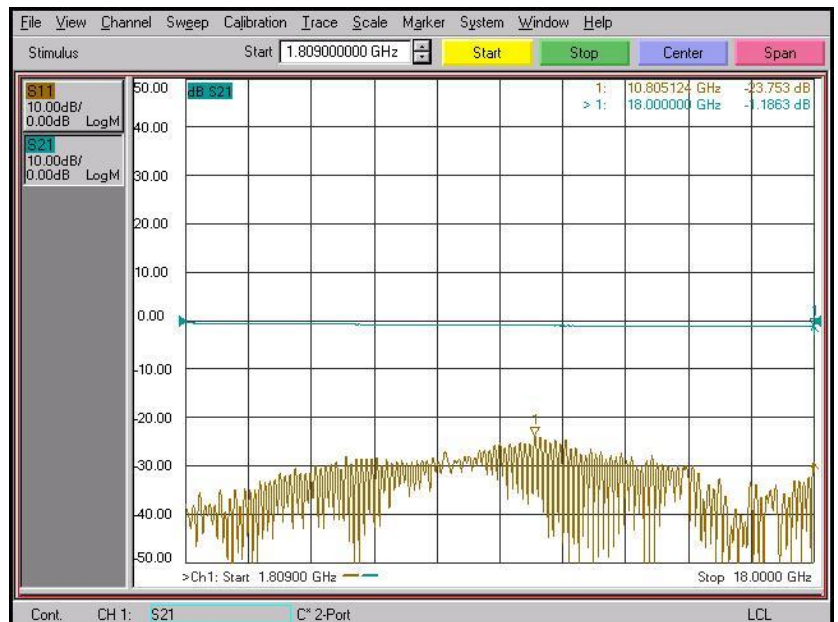
**Part No: W101-SM1SM1-1M**

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



**Part No: W101-NM1NM1-1M**

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

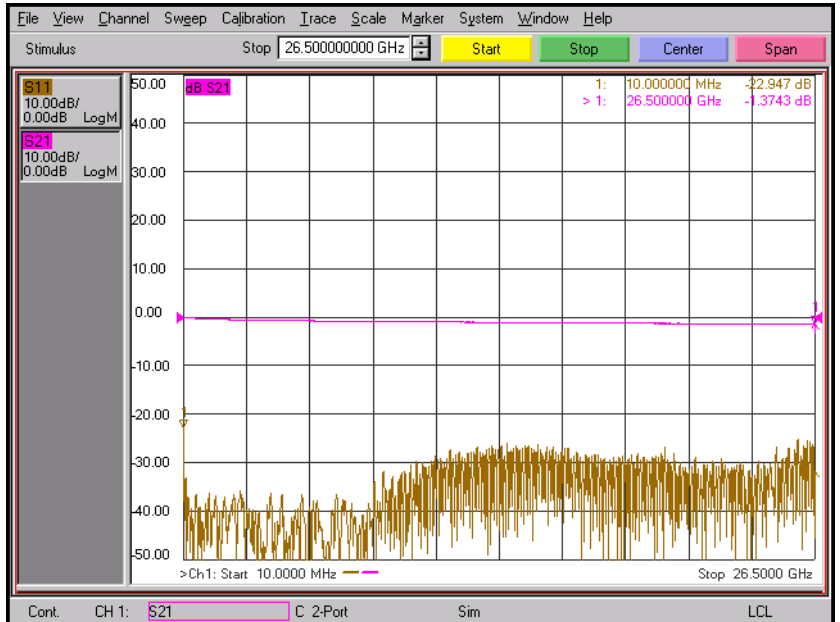


■ **Test Result**

**W101 cable Assembly**

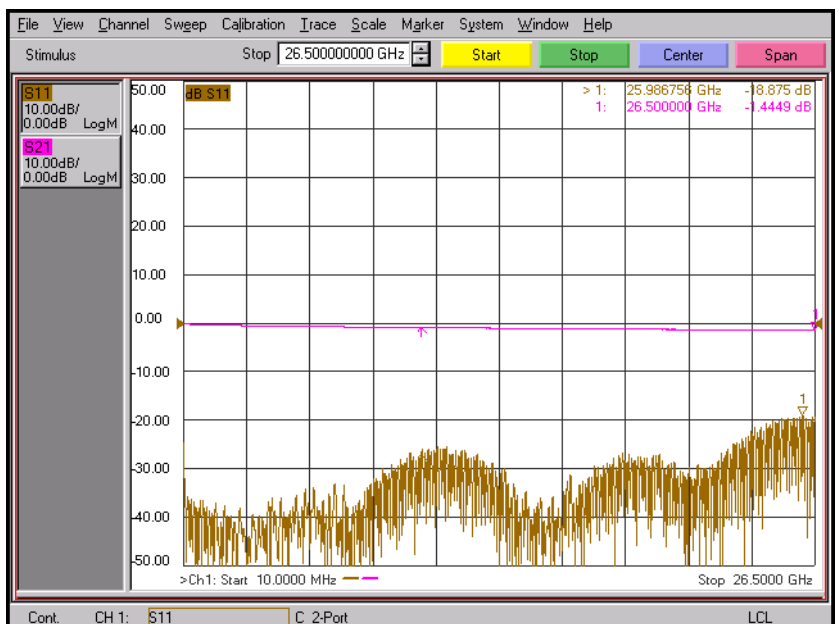
**Part No: W101-3M13M1-1M**

- Frequency : DC to 26.5 GHz
- Connector : 3.5 mm(Male)
- Cable Length : 1 meter



**Part No: W101-3F13F1-1M**

- Frequency : DC to 18 GHz
- Connector : 3.5 mm(Female)
- Cable Length : 1 meter



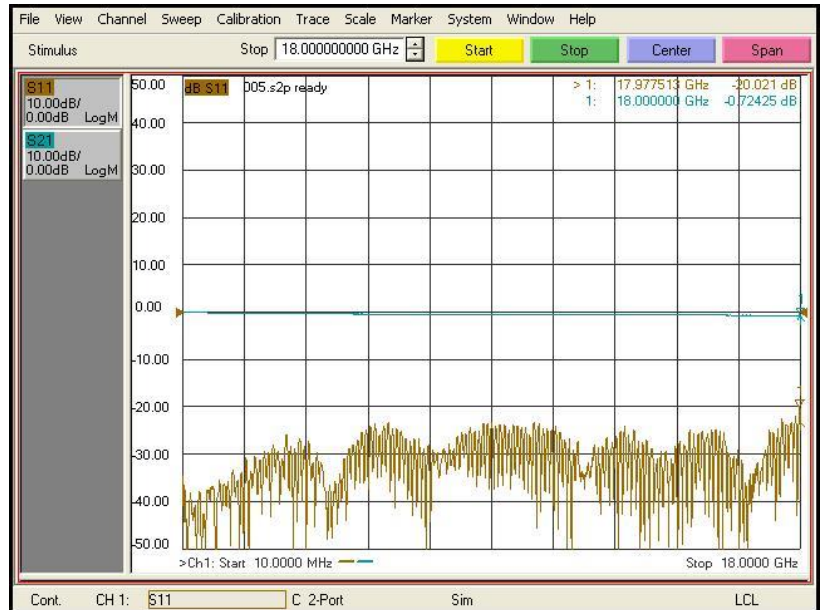


■ **Test Result**

**W102 cable Assembly**

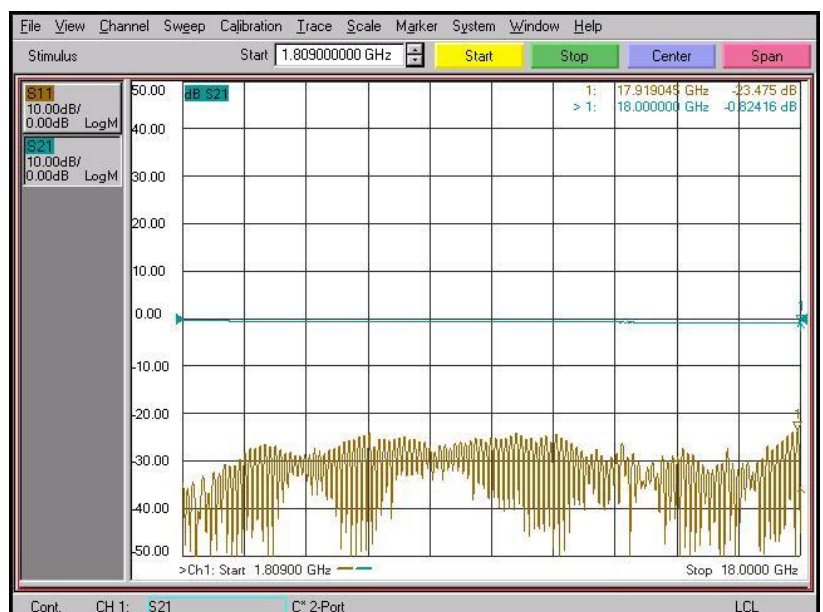
**Part No: W102-SM1SM1-1M**

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



**Part No: W102-NM1NM1-1M**

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



■ **Selection Guide**

**W100 – KM1KM1 - 1M – 2PS**

**Phase Matching**

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

**Cable Type      Connector Type      Cable Length**

W100  
W101  
W102

SM1 : SMA Male  
3M1 : 3.5 mm Male  
KM1 : 2.92 mm Male  
KF1 : 2.92 mm Female  
NM1 : N-type Male

Unit : Meter



■ **Revision History**

<b>Revision</b>	<b>Date</b>	<b>Changes</b>
Ver 1.0	2015-06-29	Released W1 Series Cable Assembly
Ver.1.1	2015-11-16	Add test results for each type
Ver 2.1	2018-07-05	Add new model (3.5 mm type, phase matching)
Ver 2.2	2019-07-01	Update test results
Ver.2.3	2019-11-01	Updated specification
Ver.2.4	2020-02-03	Add test result for 2.92 mm Female type
Ver 2.5	2020-04-17	Add N-type for W101, W02 cable
Ver 2.6	2020-05-12	Updated specification
Ver 3.0	2021-02-04	Add 3.5 mm type for W101 cable