High Performance Cable Assemblies

Φ.047 Cable types (Flexible, Semi-Rigid, Semi-Flexible)

withwave
Versatile RF & MW Test Solutions

Withwave offers ***High Performance Cable Assemblies*** ***with 0.047''cable diameter*** (Flexible, Semi-Rigid & Semi-Flexible) for various kinds of interconnection solutions such as High Speed Testing, Short range and Telecommunication applications.

Features

- DC to 26.5, 40, 50 & 67 GHz
- Standard and custom cable options available
- Available interface : SMA, 2.92 mm, SMPM, 2.4 mm & 1.85 mm types

Applications

- Telecommunication Systems
- High Speed Testing
- Short range interconnection

Cable Specifications

Scope	Specification	SR047	SF047	FX047
Physical	Center Conductor (mm)	0.29	0.29	0.29
	Dielectric (mm)	0.92	0.92	0.92
	Jacket (mm)	1.19	1.19	1.53
Electrical	Impedance (Ohm)	50		
	Operation Freq.(GHz)	40		
	Velocity of propagation(%)	69.5		70
	Shielding Effectiveness (dB)	100		90
Mechanical & Environmental	Weight (g/M)	5.7	5.7	7.2
	Operation Temperature	-40~ +125℃		-55~ +125℃

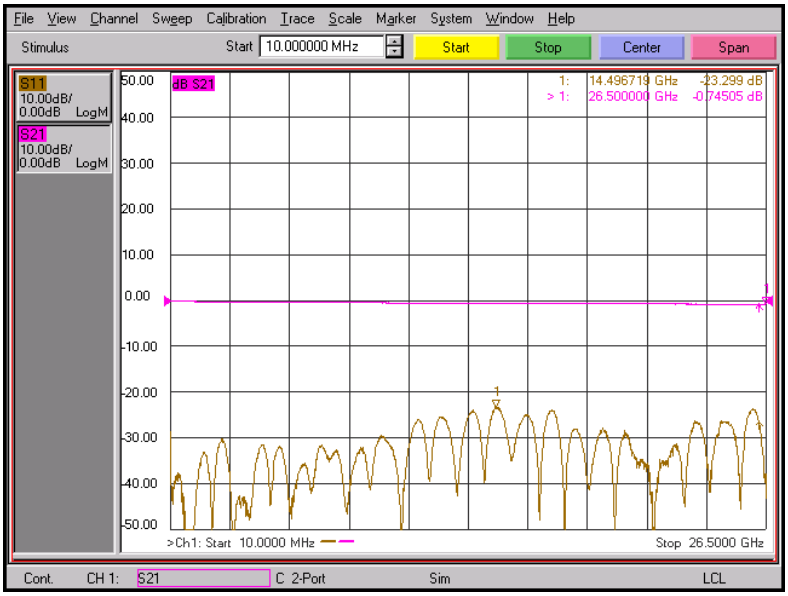
■ Test Results

SMA type

Flexible .047

Part No: FX047-SM1SM1-100mm

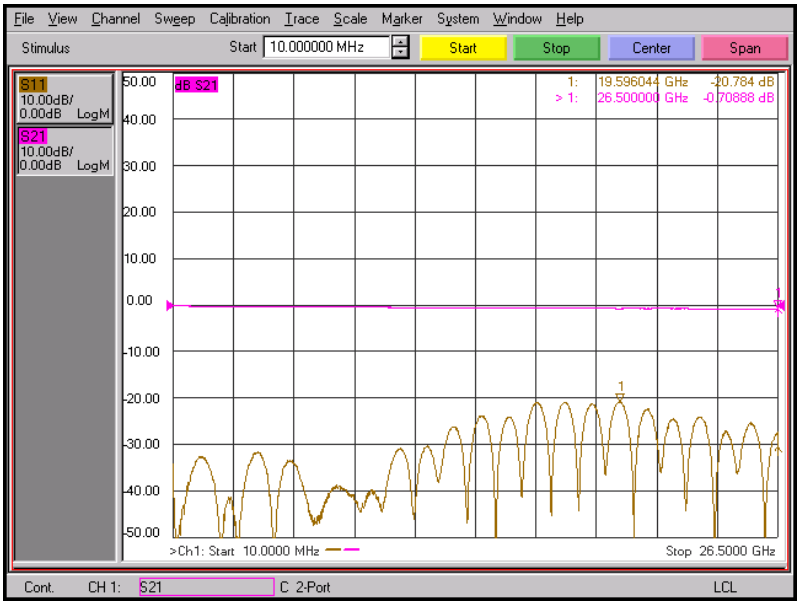
- Frequency : DC to 26.5 GHz
- Connector : SMA(Male)
- Cable Length : 100 mm



Flexible .047

Part No: FX047-SF1SF1-100mm

- Frequency : DC to 26.5 GHz
- Connector : SMA(Female)
- Cable Length : 100 mm



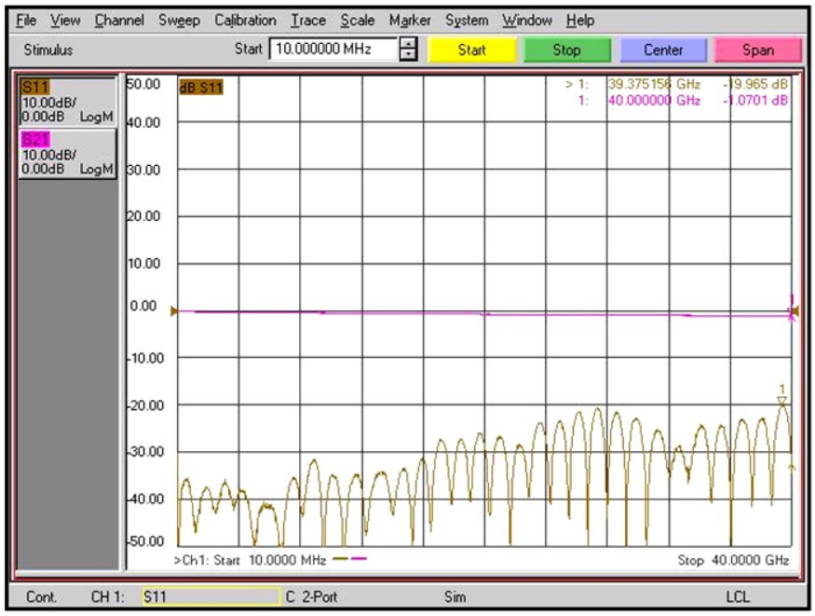
■ Test Results

2.92 mm type

Flexible .047

Part No: FX047-KM1KM1-100mm

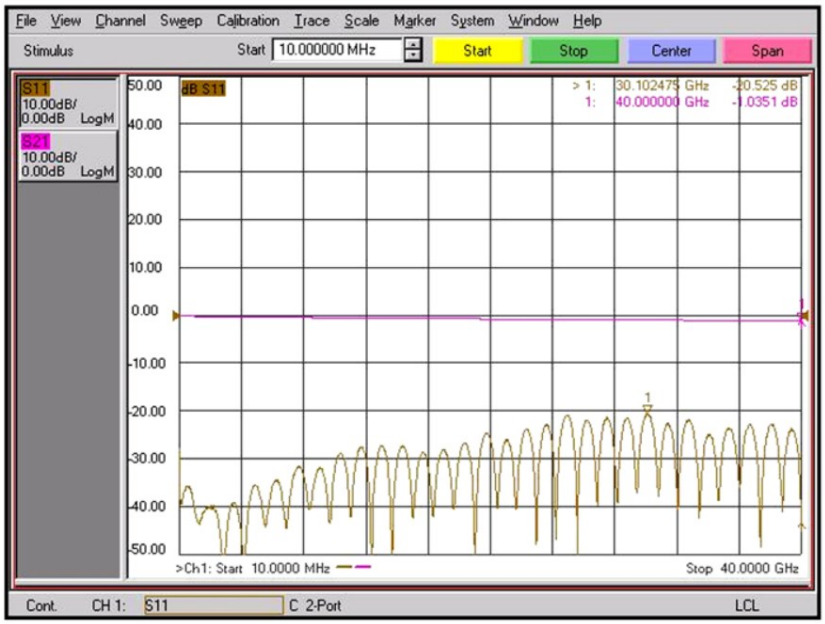
- Frequency : DC to 40 GHz
- Connector : 2.92 mm(Male)
- Cable Length : 100 mm



Flexible .047

Part No: FX047-KF1KF1-100mm

- Frequency : DC to 40 GHz
- Connector : 2.92 mm(Female)
- Cable Length : 100 mm



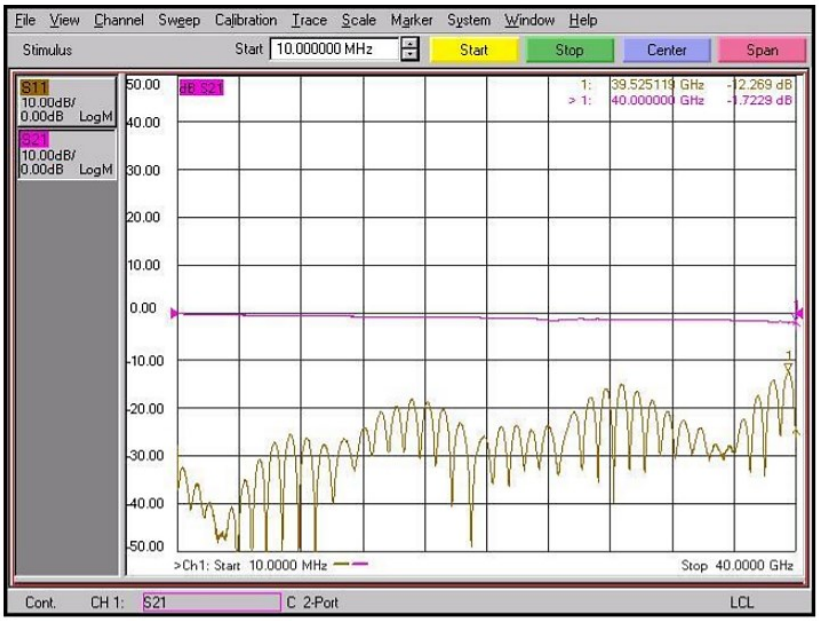
■ Test Results

SMPM type

Flexible .047

Part No: FX047-PF1PF1-100mm

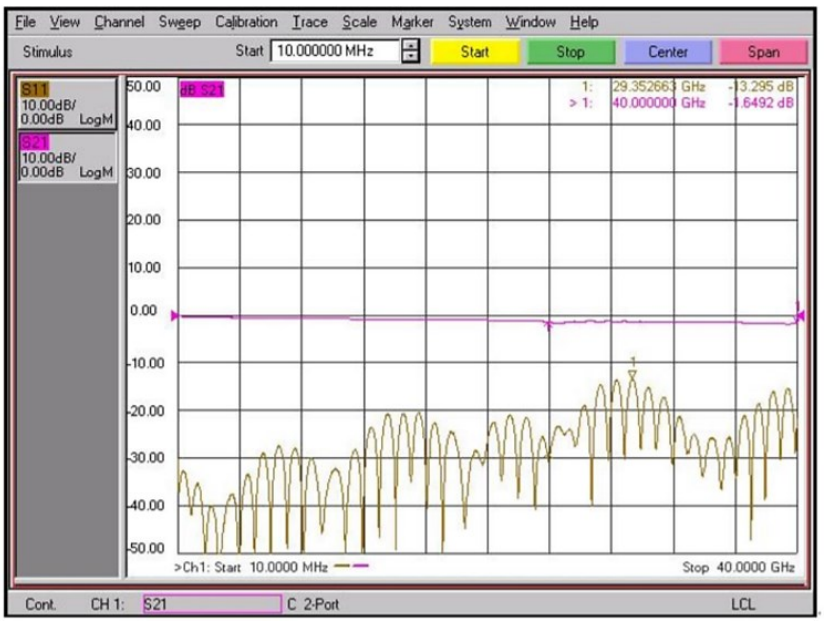
- Frequency : DC to 40 GHz
- Connector : SMPM (Female)
- Cable Length : 100 mm



Semi-Flexible .047

Part No: SF047-PF1PF1-100mm

- Frequency : DC to 40 GHz
- Connector : SMPM(Female)
- Cable Length : 100 mm



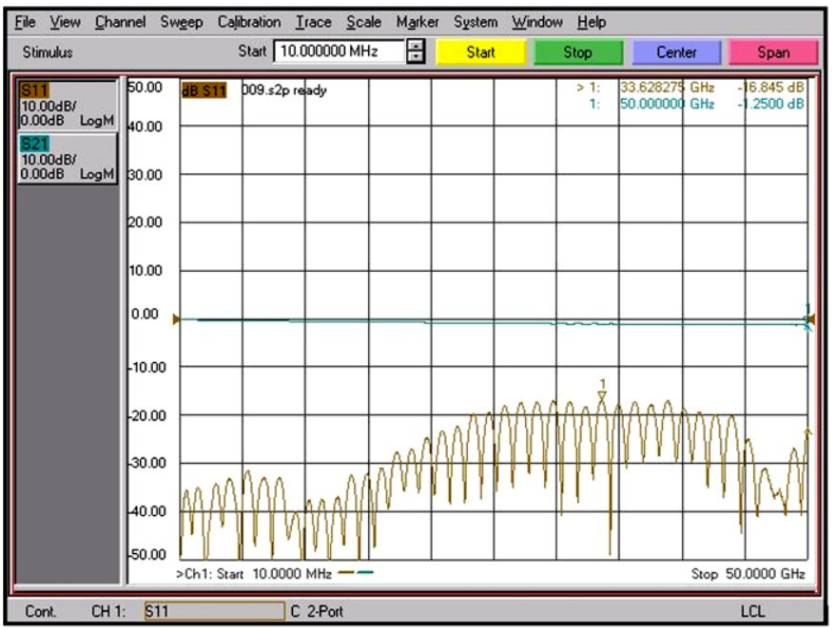
Test Results

2.4 mm type

Flexible .047

Part No: FX047-2M12M1-100mm

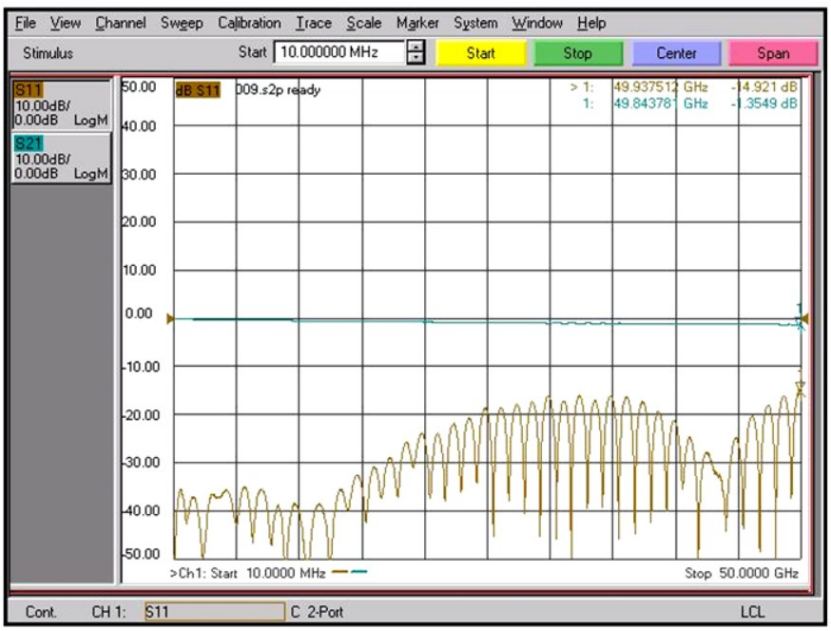
- Frequency : DC to 50 GHz
- Connector : 2.4 mm(Male)
- Cable Length : 100 mm



Flexible .047

Part No: FX047-2F12F1-100mm

- Frequency : DC to 50 GHz
- Connector : 2.4 mm(Female)
- Cable Length : 100 mm



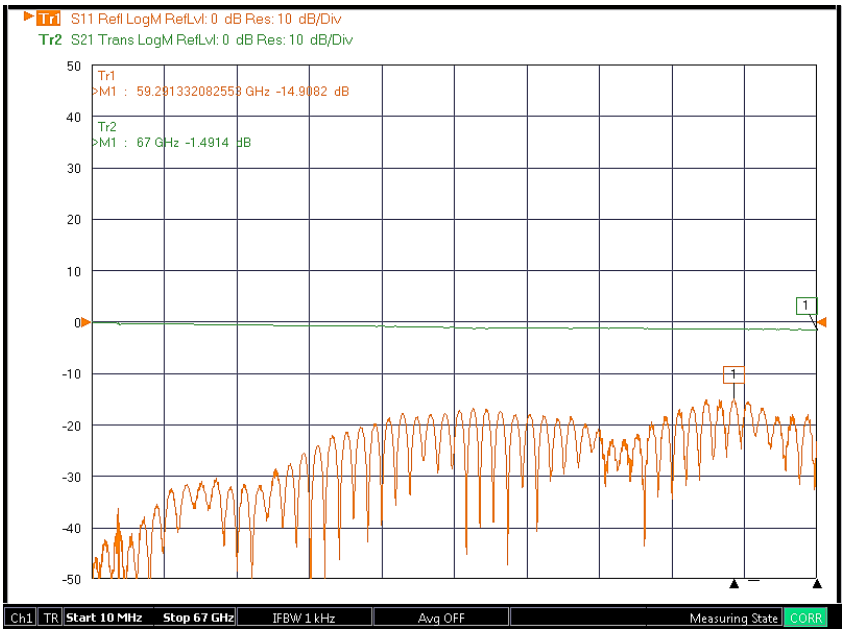
Test Results

1.85 mm type

Flexible .047

Part No: FX047-VM1VM1-100mm

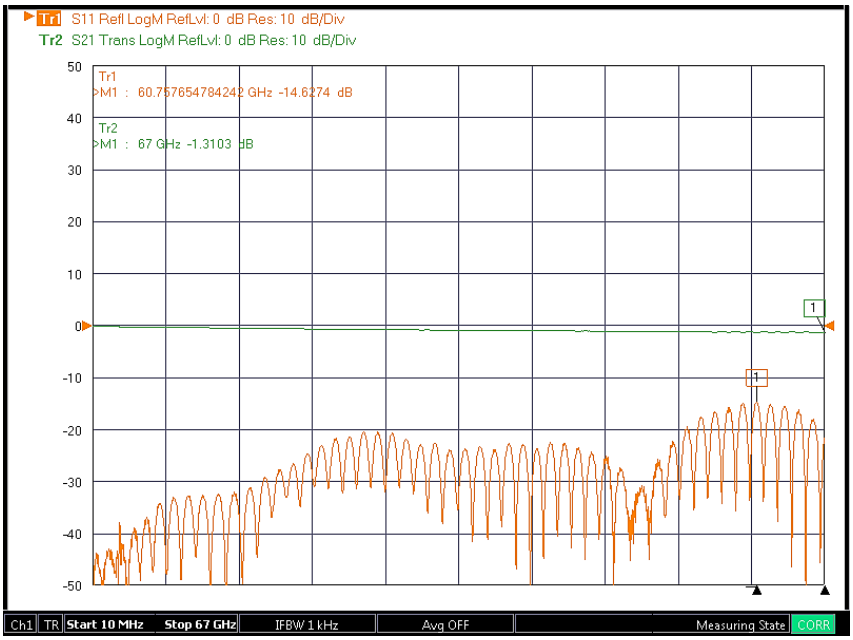
- Frequency : DC to 67 GHz
- Connector : 1.85 mm(Male)
- Cable Length : 100 mm



Flexible .047

Part No: FX047-VF1VF1-100mm

- Frequency : DC to 67 GHz
- Connector : 1.85 mm(Female)
- Cable Length : 100 mm



Selection Guide

FX047 – KM1KM1 – 0.1M

Cable Type

FX047 : Flexible
SR047 : Semi-Rigid
SF047 : Semi-Flexible

Connector Type

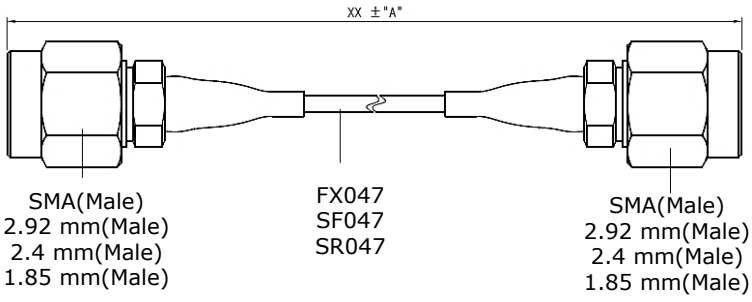
SM1: SMA(Male)
SF1 : SMA(Female)
PM1: SMPM(Female)
KF1 : 2.92 mm(Female)
KM1: 2.92 mm(Male)
2M1 2.4 mm(Male)
2F1 : 2.4 mm(Female)
VM1: 1.85 mm(Male)
VF1 : 1.85 mm(Female)

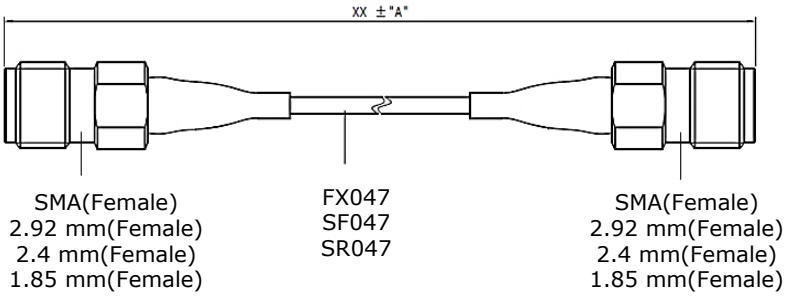
Cable Length

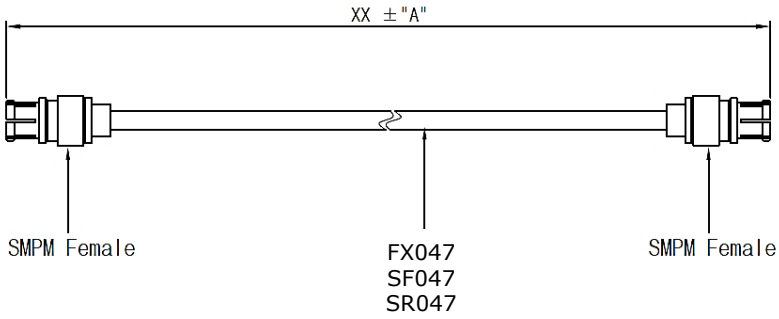
Unit : Meter

Drawing

Unit : mm







XX (Cable length)	"A" (Tolerance)
0.1M ~ 0.29M	+5.0mm / -0.0
0.3M ~ 0.99M	+15.0mm / -0.0
1.0M ~ 2.99M	+30.0mm / -0.0
3.0M ~ 9.99M	+50.0mm / -0.0
10.0M ~ 100.0M	+100.0mm / -0.0

■ Cable Specification (FX047)

Scope	FX047			Specification
Electrical Properties	Operating Frequency Range (GHz)			67
	Impedance (Ohm)			50 ± 2
	Velocity of Propagation (%)			70
	Shielding effectiveness (dB)			>90
	Voltage Withstand(V, DC)			350
Material & Construction		Structure	Size (mm)	Material
	1	Center Conductor	0.29	Solid Bare Copper
	2	Dielectric	0.92	Solid PTFE
	3	1st Outer Shield	1.08	Flat Silver Plated Copper
	4	2nd Outer Shield	1.28	Alloy
	5	Jacket	1.53	FEP (Color : Skyblue)
Mechanical And Environmental Performance	Weight (g/m)			7.2
	Operating Temperature Range (°C)			-55~+125
	Bend Radius : Installation (mm)			7.67
	Bend Radius : Repeated (mm)			14.20

Attenuation values

Freq MHz	dB /M	Average power kW
300	0.67	0.046
500	0.87	0.036
1000	1.24	0.025
3000	2.16	0.014
6000	3.08	0.010
10000	4.01	0.008
12400	4.48	0.007
16000	5.12	0.006
18000	5.44	0.006
26500	6.66	0.005
40000	8.29	0.004

Revision History

Revision	Date	Changes
Ver 1.0 Ver 1.1	2020-07-01 2022-04-11	Released High Performance Cable Assembly (047 type) Add cable spec. of FX047