

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

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°C		-55~ +125°C

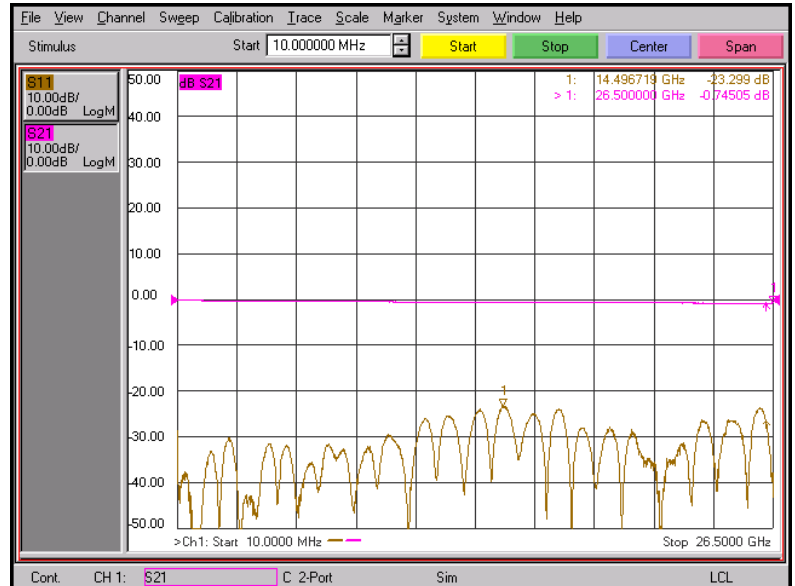
■ Test Results

SMA type

Flexible .047

Part No: FX047-SM1SM1-100mm

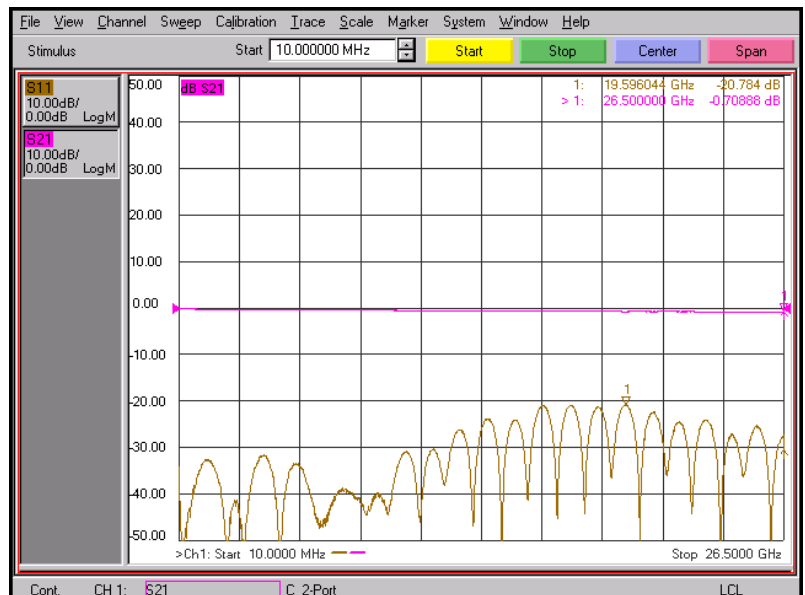
- Frequency : DC to 26.5 GHz
- Connector : SMA(Male)
- Cable Length : 100 mm



Flexible .047

Part No: FX047-SF1SF1-100mm

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



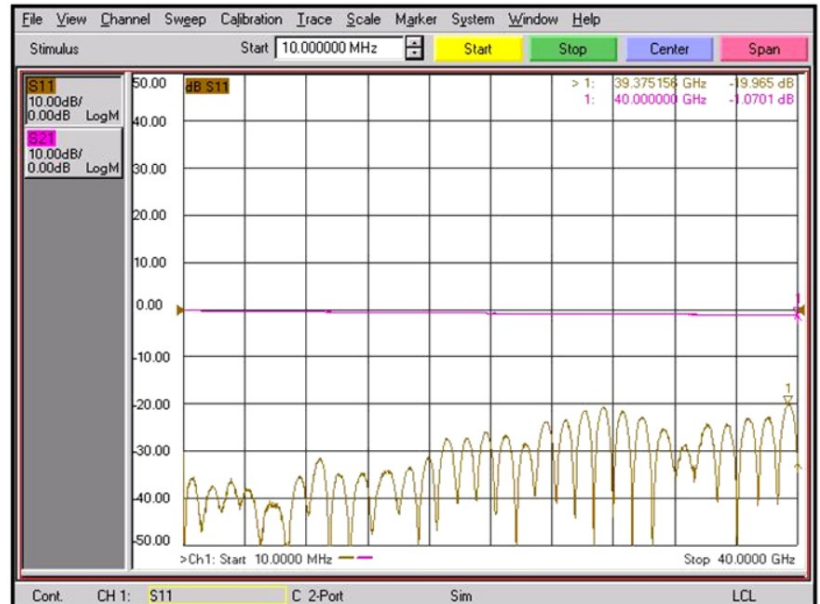
■ Test Results

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



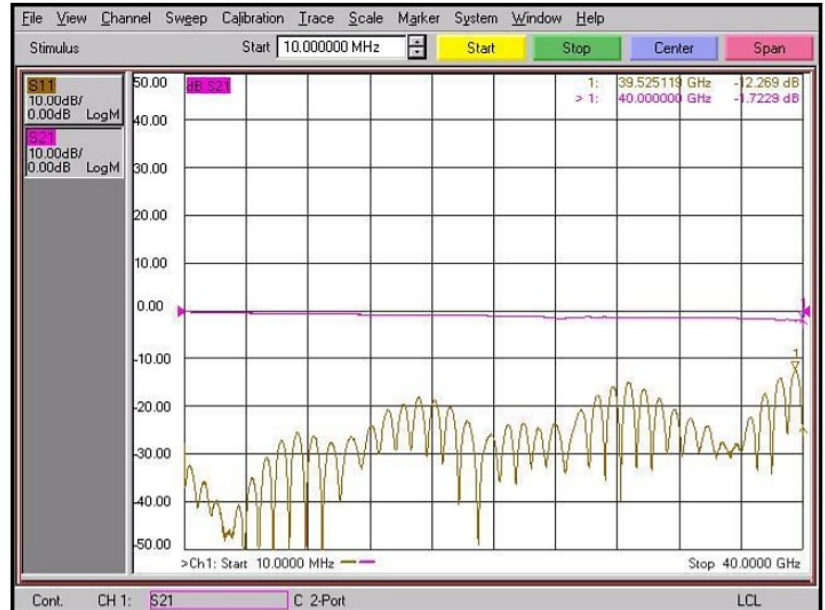
■ Test Results

SMPM type

Flexible .047

Part No: FX047-PF1PF1-100mm

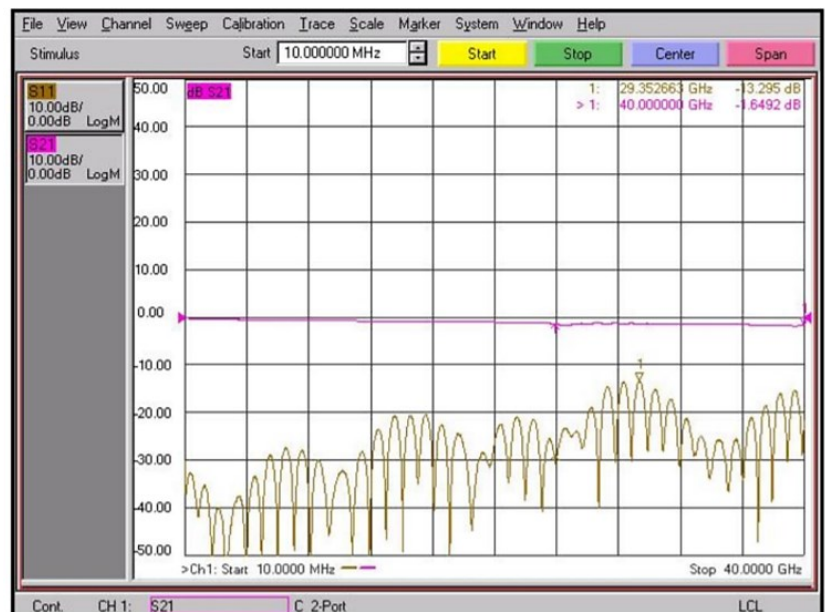
- Frequency : DC to 40 GHz
- Connector : SMPM (Female)
- Cable Length : 100 mm



Semi-Flexible .047

Part No: SF047-PF1PF1-100mm

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



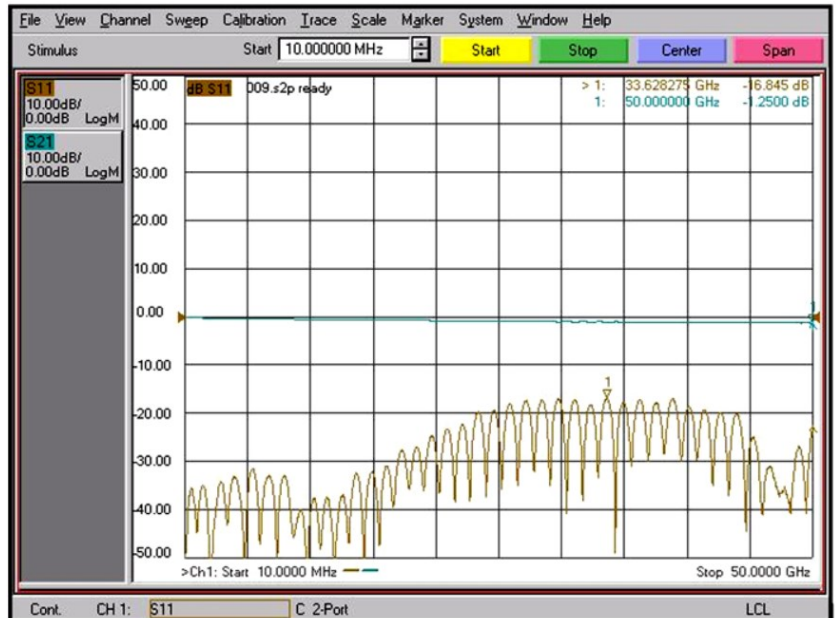
■ Test Results

2.4 mm type

Flexible .047

Part No: FX047-2M12M1-100mm

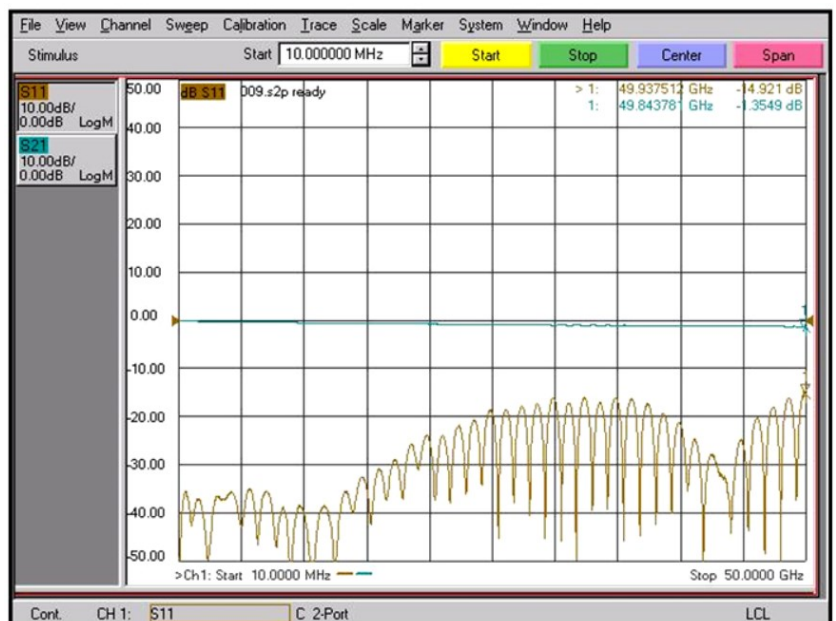
- Frequency : DC to 50 GHz
- Connector : 2.4 mm(Male)
- Cable Length : 100 mm



Flexible .047

Part No: FX047-2F12F1-100mm

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



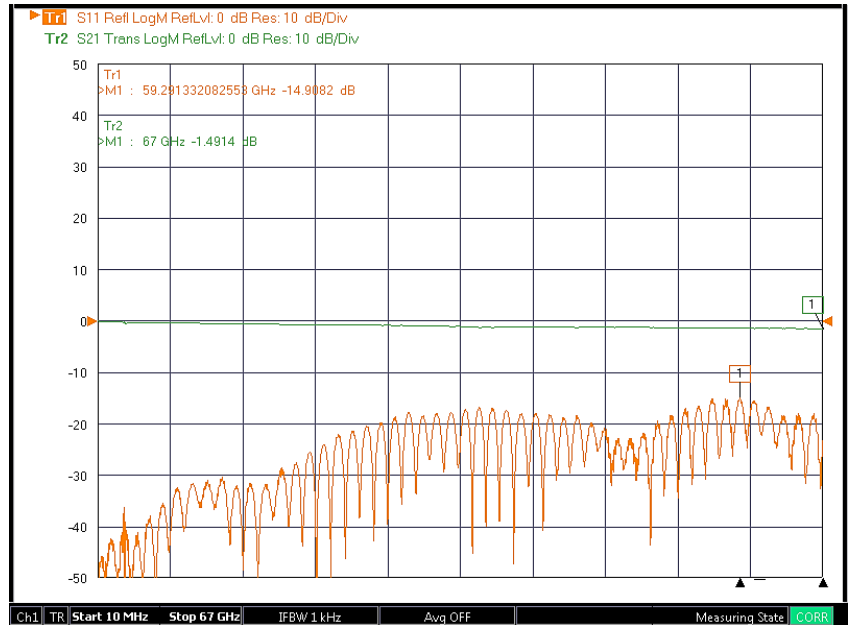
■ Test Results

1.85 mm type

Flexible .047

Part No: FX047-VM1VM1-100mm

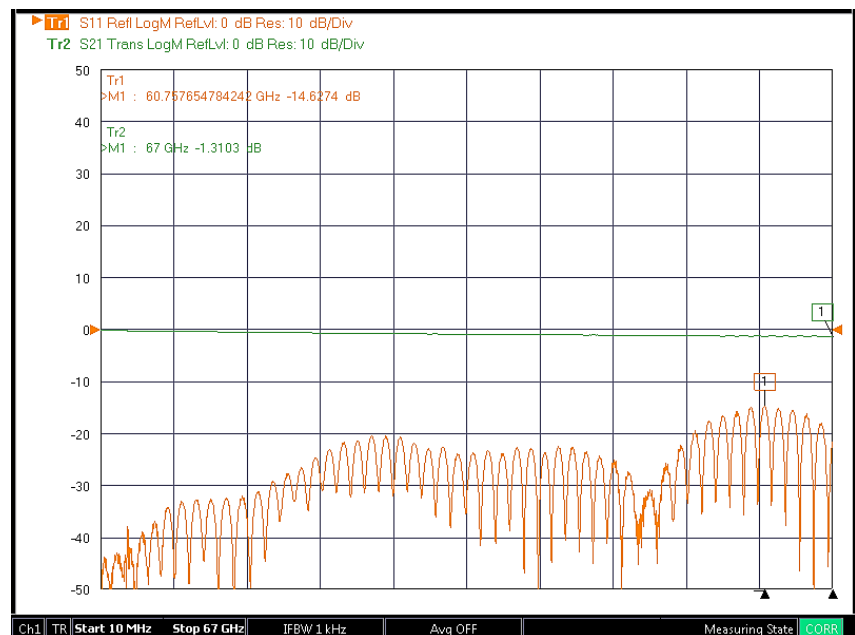
- Frequency : DC to 67 GHz
- Connector : 1.85 mm(Male)
- Cable Length : 100 mm



Flexible .047

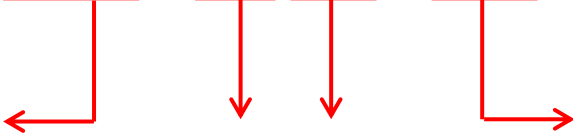
Part No: FX047-VF1VF1-100mm

- 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

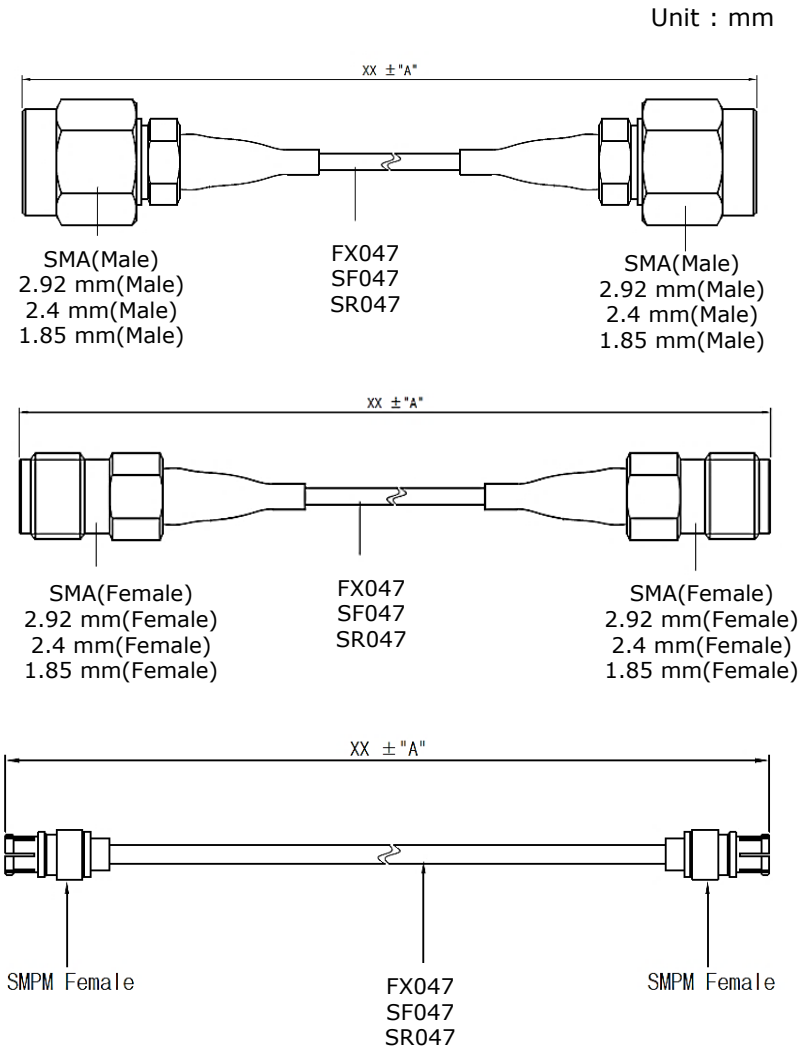
- SM1: SMA(Male)
- SF1 : SMA(Female)
- PM1: SMPM(Female)
- KF1 : 2.92 mm(Female)
- KM1: 2.92 mm(Male)
- 2M1 2.4 mm(Male)
- 2F1 : 2.4 mm(Female)
- VM1: 1.85 mm(Male)
- VF1 : 1.85 mm(Female)

Cable Length

Unit : Meter



Drawing



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	1 st Outer Shield	1.08	Flat Silver Plated Copper	
	4	2 nd 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	

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■ 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