

# Semi-Rigid & Flexible Cable Assembly **047", 085", 141" & 250" Type**

**Withwave's Semi-Rigid and Flexible Cable Assemblies** have different types of cable outer diameters with 0.047", 0.085", 0.141" & 0.250" for various kinds of application according to customer's requirement.

## ■ Features

- Center Conductor : Silver plated Copper wire
- Dielectric core : Solid PTFE
- Jacket : Copper tubing, Tin-plated



## ■ Specification (Semi-Rigid type)

Scope	Specification	SR047	SR085	SR141
Physical	Center Conductor (mm)	0.29	0.51	0.92
	Dielectric (mm)	0.92	1.68	2.98
	Jacket (mm)	1.19	2.20	3.58
Electrical	Impedance (Ohm)		50	
	Operation Freq.(GHz)	20	20	20
	Velocity of propagation( %)		69.5	
	Capacitance (pF/ft)	32	32	29.9
	Shielding Effectiveness (dB)		100	
Mechanical & Environmental	Weight (g/M)	5.7	20.2	46.7
	Operation Temperature		-40~ +125°C	

## ■ Specification (Semi-Flexible type)

Scope	Specification	SF047	SF085	SF141
Physical	Center Conductor	0.29	0.54	0.95
	Dielectric	0.92	1.68	2.98
	Jacket	1.19	2.18	3.58
Electrical	Impedance (Ohm)		50	
	Operation Freq.(GHz)	20	20	20
	Velocity of propagation( %)		69.5	
	Capacitance (pF/ft)	32	32	20
	Shielding Effectiveness (dB)		100	
Mechanical & Environmental	Weight (g/M)	5.7	16.0	45
	Operation Temperature		-40~ +125°C	

# Semi-Rigid & Flexible Cable Assembly 047", 085", 141" & 250" Type

## ■ Specification (Semi-Flexible type with Blue Jacket)

Scope	Specification	SF085B	SF141B
Physical	Center Conductor	0.54	0.95
	Dielectric	1.68	2.98
	Outer Shield	2.18	3.58
	Jacket (Color : Blue)	2.80	4.20
Electrical	Impedance (Ohm)	50 Ohm	
	Operation Freq.(GHz)	20	20
	Velocity of propagation( %)	69.5	
	Capacitance (pF/ft)	32	20
	Shielding Effectiveness (dB)	100	
Mechanical & Environmental	Weight (g/M)	16.0	45
	Operation Temperature	-40~ +125℃	

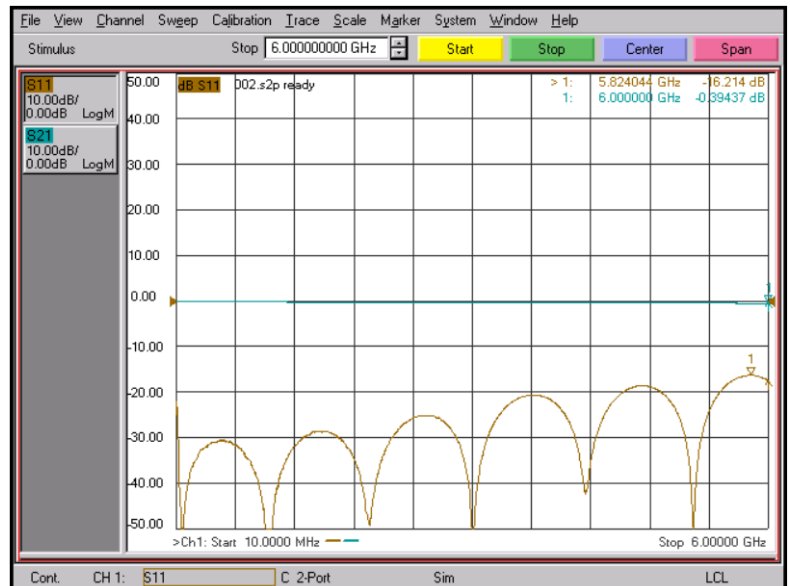


## ■ Test Result

### SF047 cable Assembly

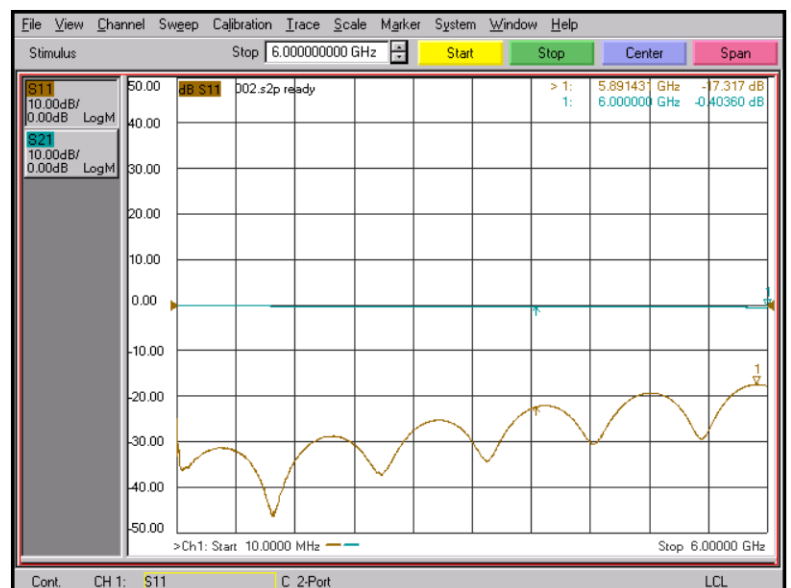
#### Part No: SF047-SM1SM1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Male)
- Cable Length : 0.1 meter



#### Part No: SF047-SF1SF1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Female)
- Cable Length : 0.1 meter



## ■ Test Result

### SR047 cable Assembly

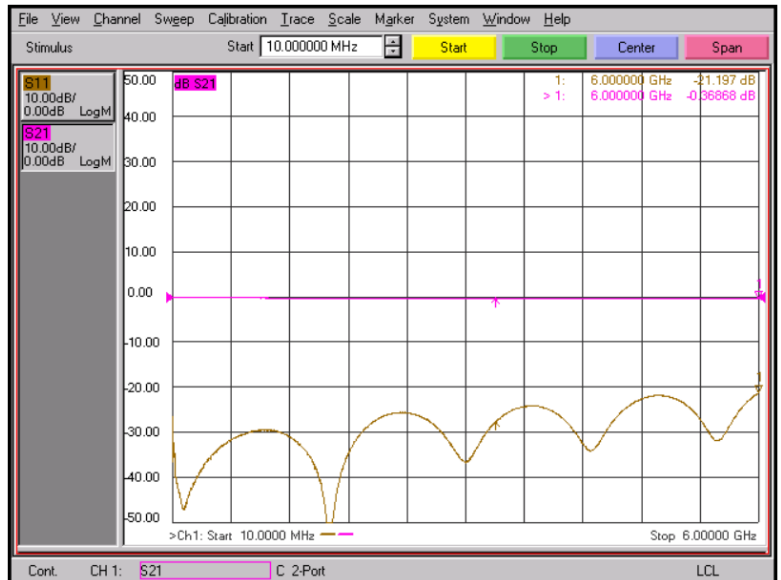
#### Part No: SR047-SM1SM1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Male)
- Cable Length : 0.1 meter



#### Part No: SR047-SF1SF1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Female)
- Cable Length : 0.1 meter

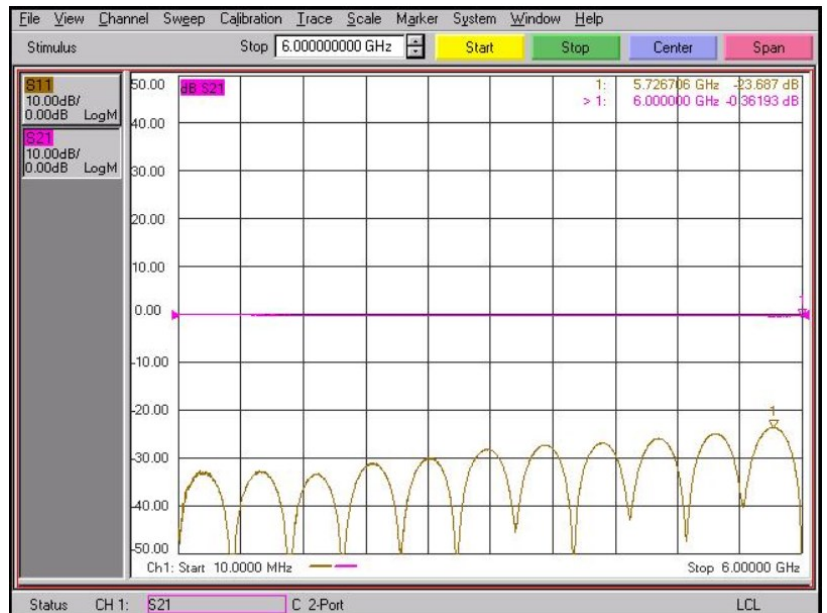


## ■ Test Result

### SF085 cable Assembly

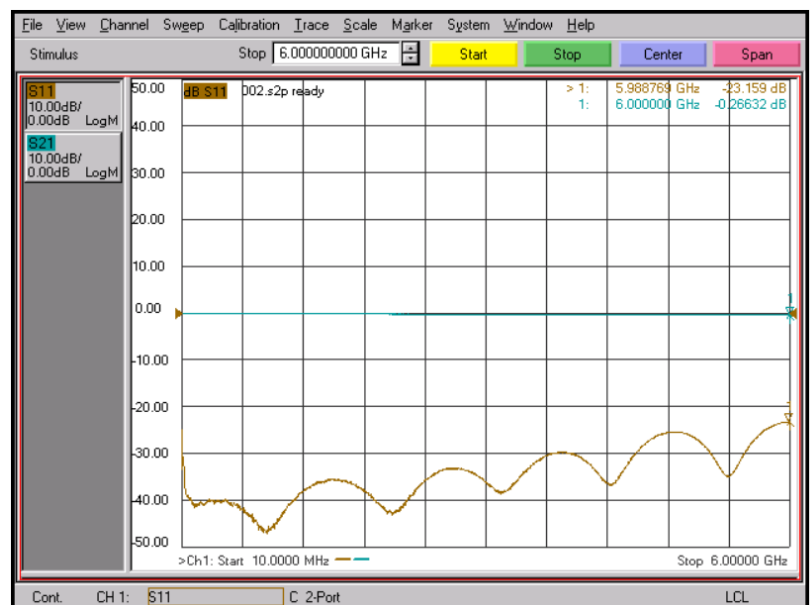
#### Part No: SF085-SM1SM1-0.2M

- Frequency : DC to 6 GHz
- Connector : SMA(Male)
- Cable Length : 0.2 meter



#### Part No: SF085-SF1SF1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Female)
- Cable Length : 0.1 meter



## ■ Test Result

### SR085 cable Assembly

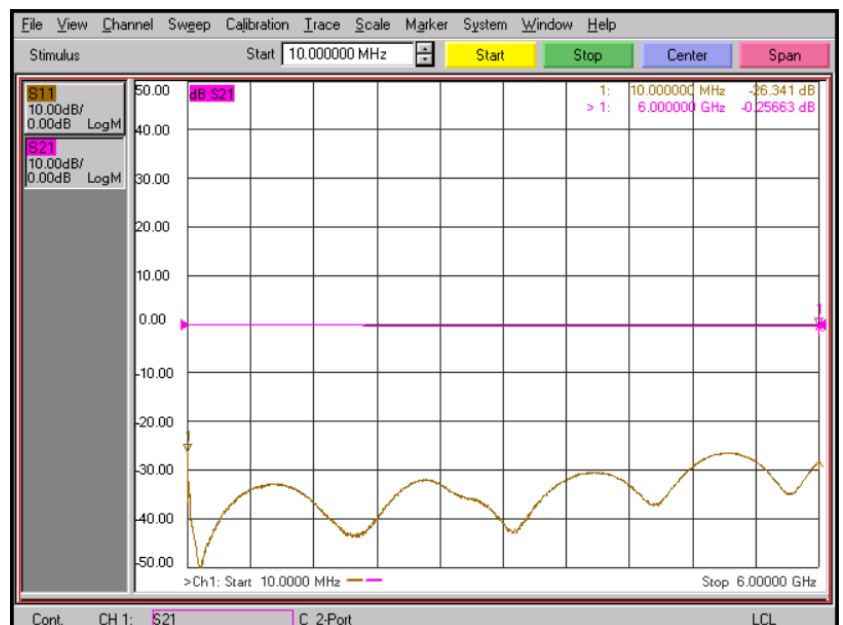
#### Part No: SR085-SM1SM1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Male)
- Cable Length : 0.1 meter



#### Part No: SR085-SF1SF1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Female)
- Cable Length : 0.1 meter

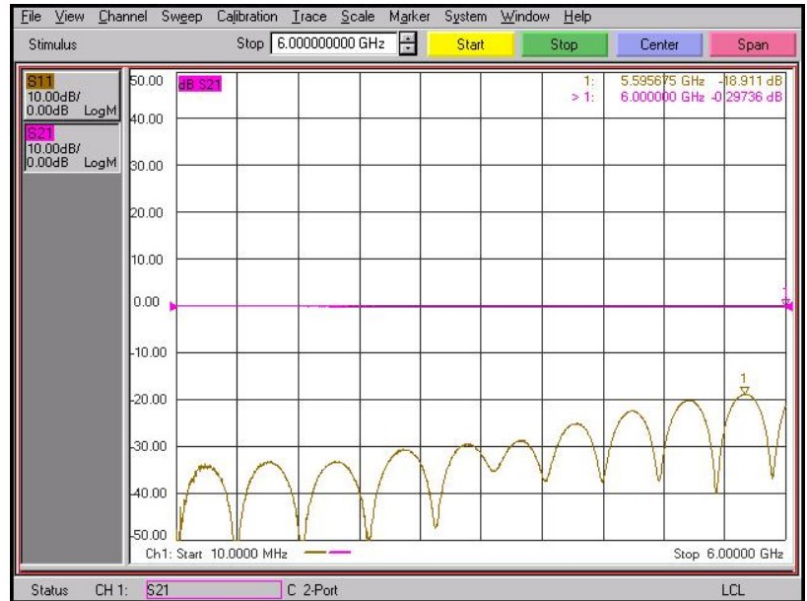


## ■ Test Result

### SF141 cable Assembly

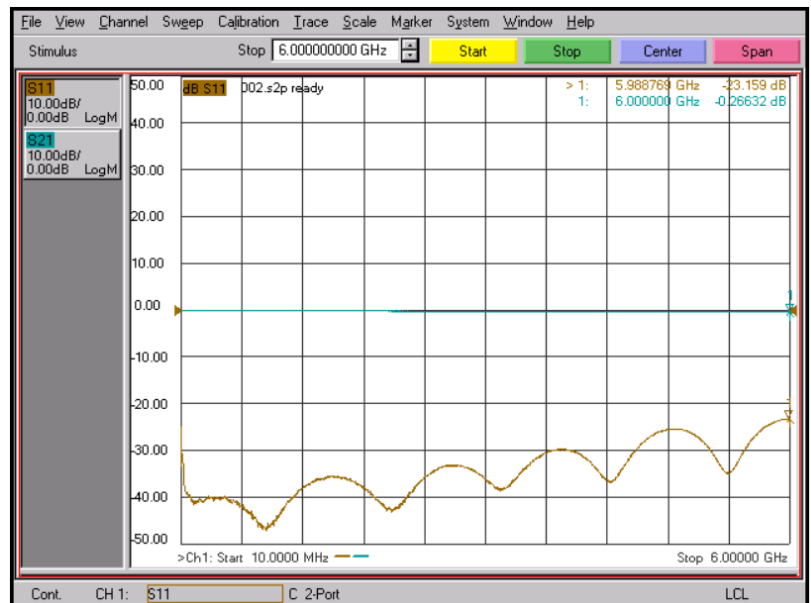
#### Part No: SF141-SM1SM1-0.2M

- Frequency : DC to 6 GHz
- Connector : SMA(Male)
- Cable Length : 0.2 meter



#### Part No: SF141-SF1SF1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Female)
- Cable Length : 0.1 meter





## ■ Test Result

### SR141 cable Assembly

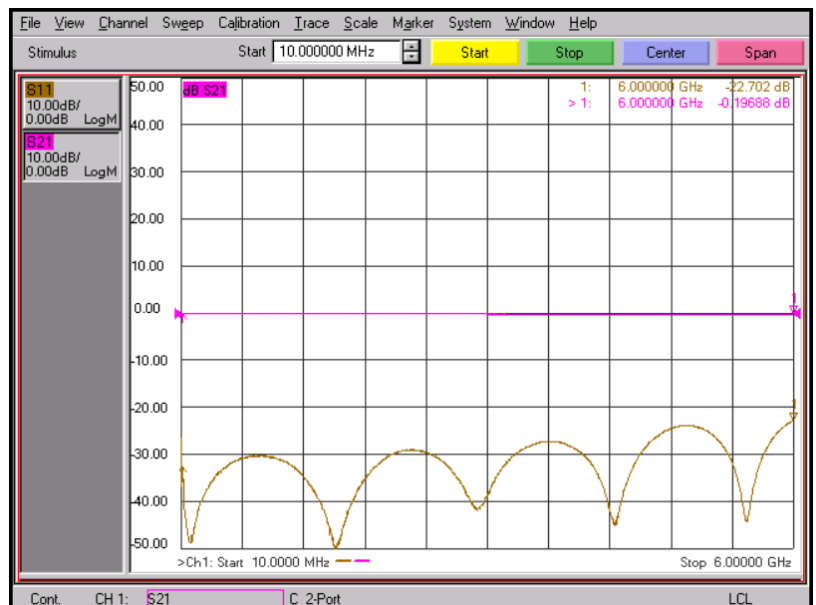
#### Part No: SR141-SM1SM1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Male)
- Cable Length : 0.2 meter



#### Part No: SR141-SF1SF1-0.1M

- Frequency : DC to 6 GHz
- Connector : SMA(Female)
- Cable Length : 0.1 meter



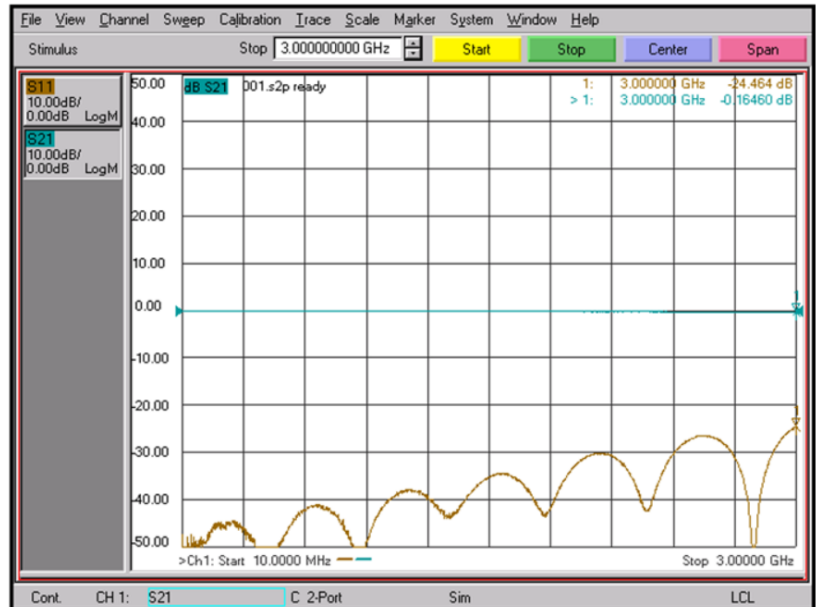


## ■ Test Result

### SF250 cable Assembly

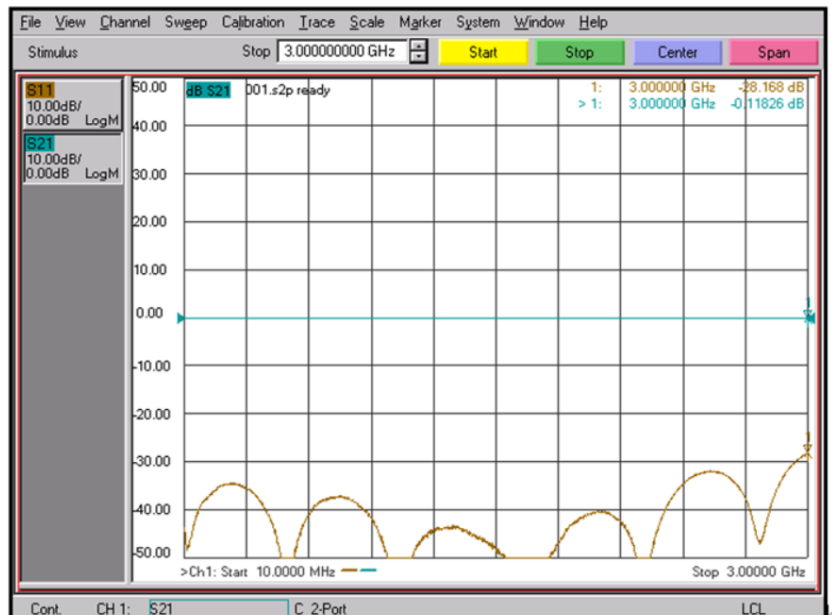
#### Part No: SF250-SM1SM1-0.2M

- Frequency : DC to 3 GHz
- Connector : SMA(Male)
- Cable Length : 0.2 meter



#### Part No: SF250-NM1NM1-0.2M

- Frequency : DC to 3 GHz
- Connector : N-type(Male)
- Cable Length : 0.2 meter

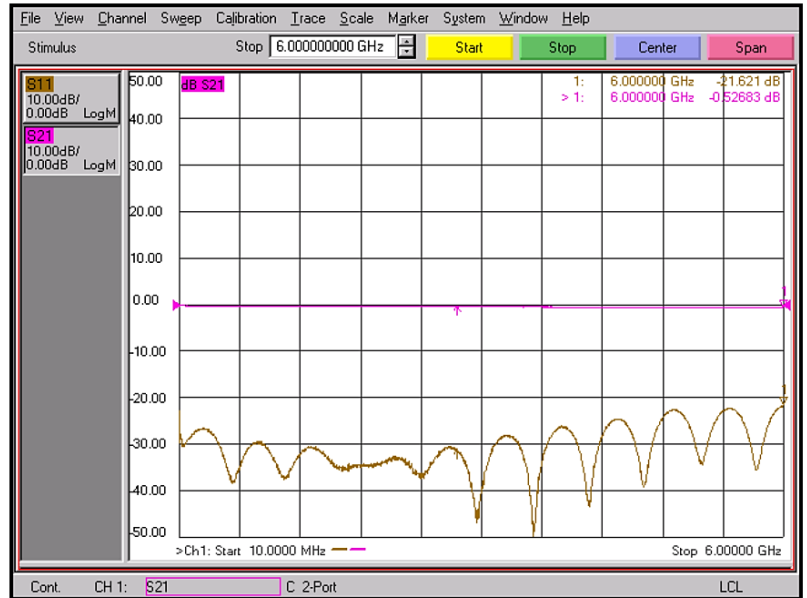
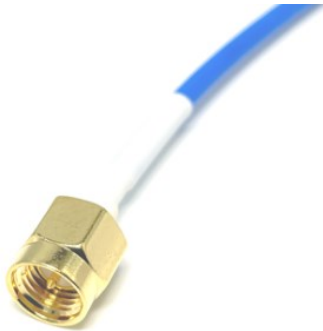


## ■ Test Result

### SF085B cable Assembly

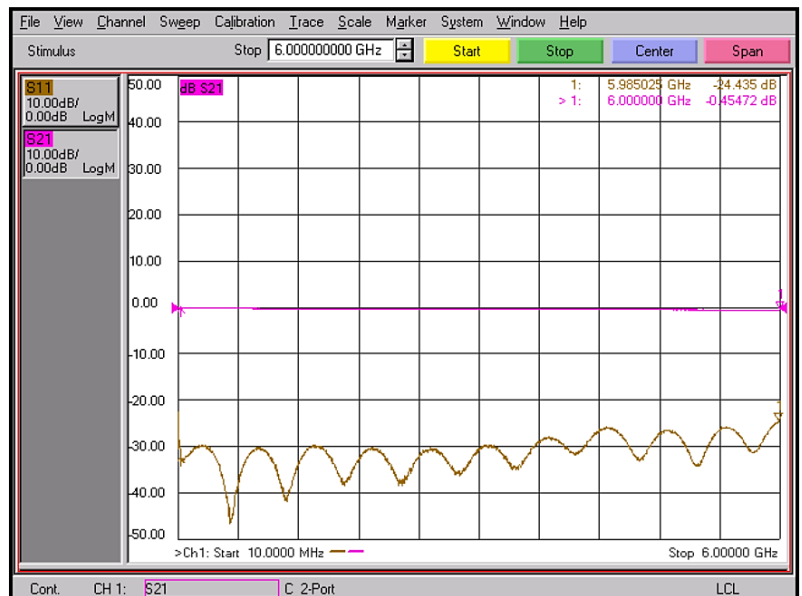
#### Part No: SF085B-SM1SM1-0.2M

- Frequency : DC to 6 GHz
- Connector : SMA(Male)
- Cable Length : 0.2 meter



#### Part No: SF085B-SF1SF1-0.2M

- Frequency : DC to 6 GHz
- Connector : SMA(Female)
- Cable Length : 0.2 meter

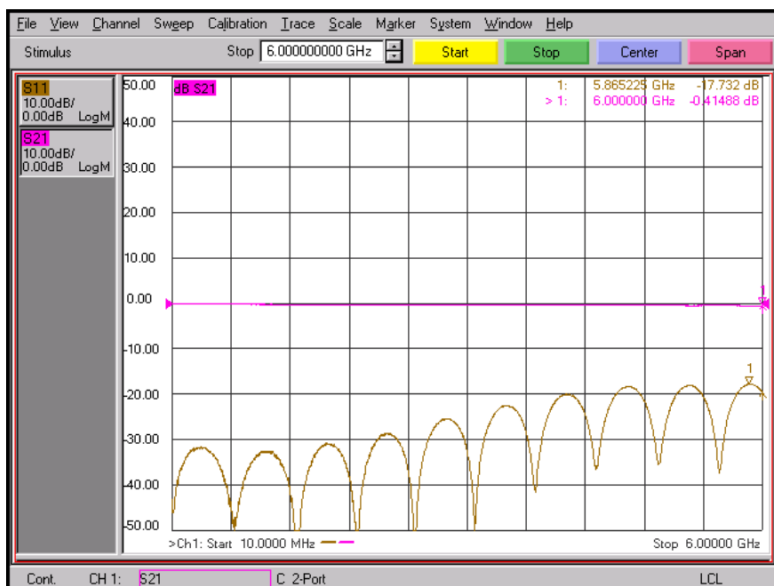


## ■ Test Result

### SF085B cable Assembly

#### Part No: SF085B-NM1NM1-0.2M

- Frequency : DC to 6 GHz
- Connector : SMA(Male)
- Cable Length : 0.2 meter

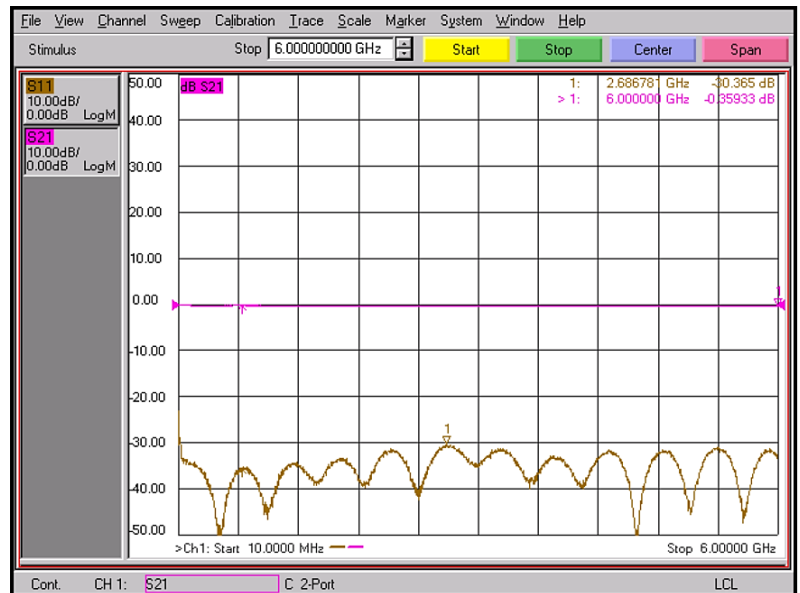


## ■ Test Result

### SF141B cable Assembly

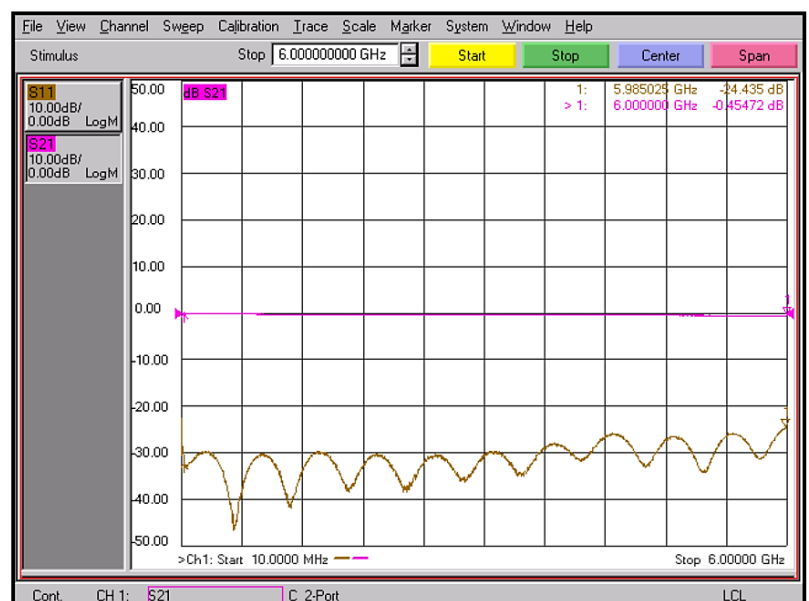
#### Part No: SF141B-SM1SM1-0.2M

- Frequency : DC to 6 GHz
- Connector : SMA(Male)
- Cable Length : 0.2 meter



#### Part No: SF141B-SF1SF1-0.2M

- Frequency : DC to 6 GHz
- Connector : SMA(Female)
- Cable Length : 0.2 meter

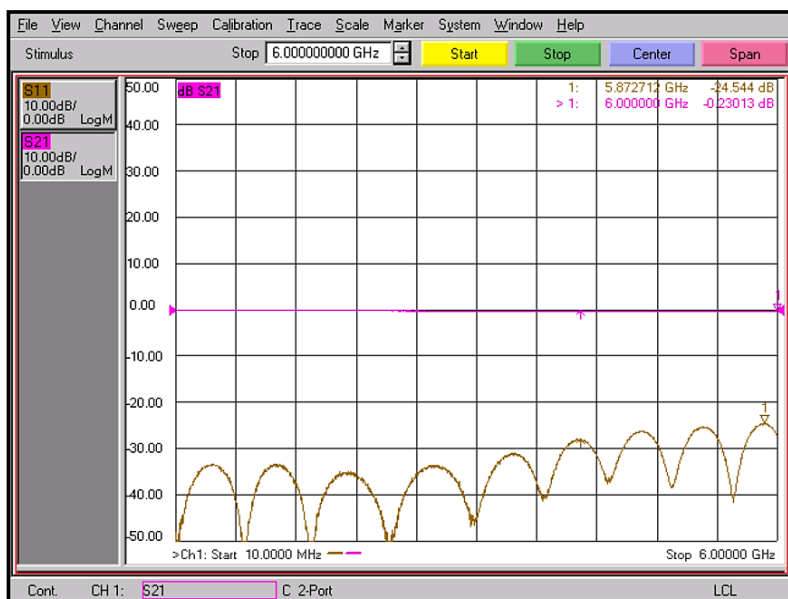


## ■ Test Result

### SF141B cable Assembly

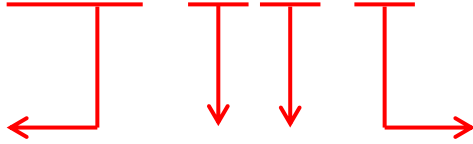
#### Part No: SF141B-NM1NM1-0.2M

- Frequency : DC to 6 GHz
- Connector : N-type (Male)
- Cable Length : 0.2 meter



## ■ Selection Guide

**SR085 - SMSF - 1M**



### Cable Type

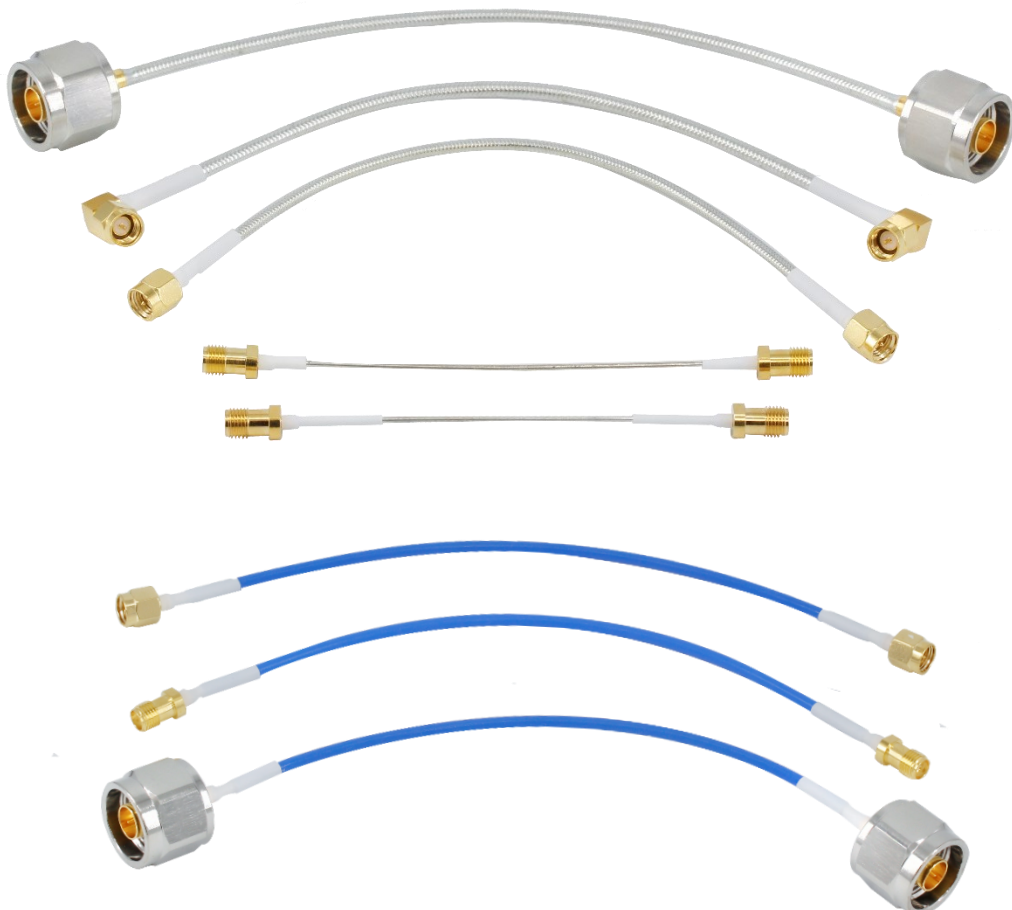
SR047  
SR085  
SR141  
SF047  
SF085  
SF085B  
SF141  
SF141B  
SF250

### Connector Type

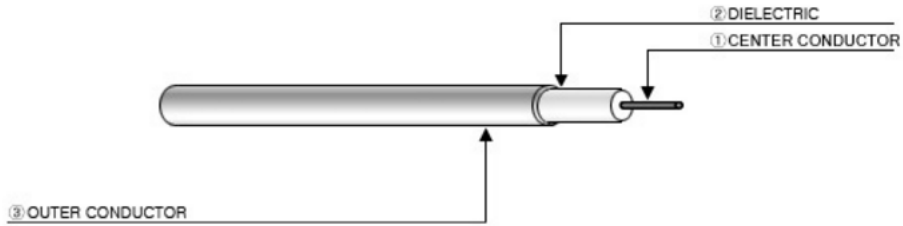
SM : SMA Male  
SF : SMA Female  
NM : N-Type Male  
NF : N-Type Female

### Cable Length

Unit : Meter



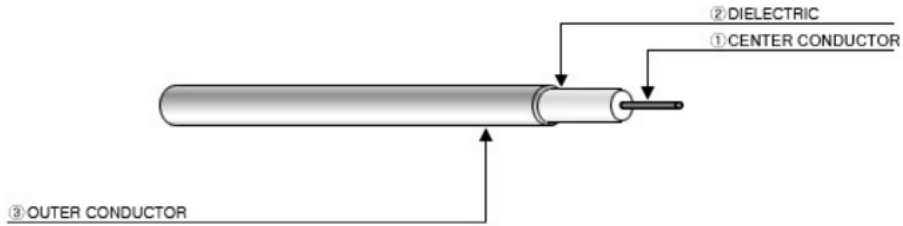
### ■ Cable Specification



Scope	Item			Specification
Electrical Properties	Operating Frequency Range (GHz) : Max			20 GHz
	Impedance (Ohm)			50 ± 2
	Capacitance			32 pF/ft
	Velocity Propagation			69.5 %
Material & Construction	Structure	Size (mm)	Material	
	1 Center Conductor	0.29±0.02	SPCW	
	2 Dielectric	0.92±0.03	PTFE	
	3 Outer Shield	1.19±0.03	TC	
Mechanical And Environmental Performance	Weight (g/m)			5.7
	Operating Temperature Range (°C)			-40~+125
Attenuation values	Freq MHz	dB /M	Average power (Watts)	
	500	0.75	66.5	
	1000	1.09	47.0	
	5000	2.60	21.0	
	10000	3.75	15.3	
	20000	5.51	10.5	

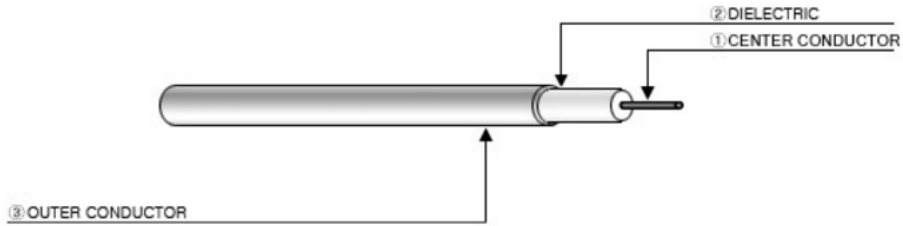


### ■ Cable Specification



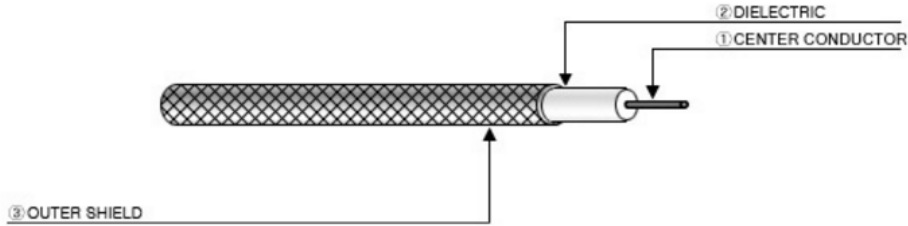
Scope	Item			Specification
Electrical Properties	Operating Frequency Range (GHz) : Max			20 GHz
	Impedance (Ohm)			50 ± 2
	Capacitance			32 pF/ft
	Velocity Propagation			69.5 %
Material & Construction	Structure	Size (mm)	Material	
	1 Center Conductor	0.51±0.005	SPCW	
	2 Dielectric	1.68±0.030	PTFE	
	3 Outer Shield	2.20±0.025	TC	
Mechanical And Environmental Performance	Weight (g/m)			20.2
	Operating Temperature Range (°C)			-40~+125
Attenuation values	Freq MHz	dB /M	Average power (Watts)	
	500	0.49	180.0	
	1000	0.72	130.0	
	5000	1.64	54.0	
	10000	2.62	35.0	
	20000	4.27	20.0	

### ■ Cable Specification



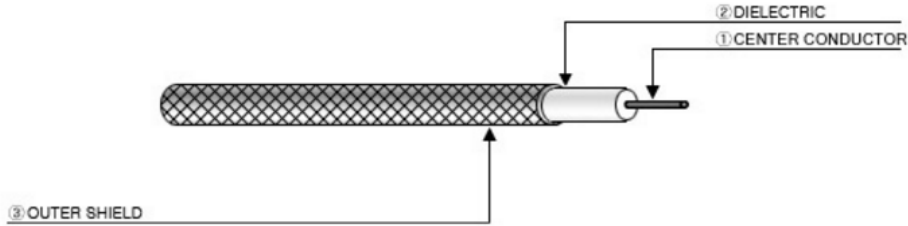
Scope	Item			Specification
Electrical Properties	Operating Frequency Range (GHz) : Max			20 GHz
	Impedance (Ohm)			50 ± 2
	Capacitance			29.9 pF/ft
	Velocity Propagation			69.5 %
Material & Construction	Structure	Size (mm)	Material	
	1 Center Conductor	0.92±0.005	SPCW	
	2 Dielectric	2.98±0.050	PTFE	
	3 Outer Shield	3.58±0.050	TC	
Mechanical And Environmental Performance	Weight (g/m)			46.7
	Operating Temperature Range (°C)			-40~+125
Attenuation values	Freq MHz	dB /M	Average power (Watts)	
	500	0.26	600.0	
	1000	0.39	450.0	
	5000	0.95	180.0	
	10000	1.48	120.0	
	20000	2.30	70.0	

### ■ Cable Specification



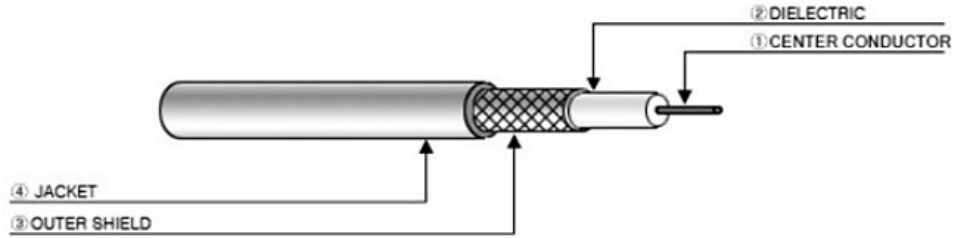
Scope	Item			Specification
Electrical Properties	Operating Frequency Range (GHz) : Max			20 GHz
	Impedance (Ohm)			50 ± 2
	Capacitance			32 pF/ft
	Velocity Propagation			69.5 %
Material & Construction	Structure	Size (mm)	Material	
	1 Center Conductor	0.29±0.005	SPCW	
	2 Dielectric	0.92±0.050	PTFE	
	3 Outer Shield	1.19±0.050	TC	
Mechanical And Environmental Performance	Weight (g/m)			5.7
	Operating Temperature Range (°C)			-40~+125
Attenuation values	Freq MHz	dB /M	Average power (Watts)	
	500	0.75	17.7	
	1000	1.09	11.9	
	5000	2.60	5.1	
	10000	3.75	3.5	
	20000	5.51	-	

### ■ Cable Specification



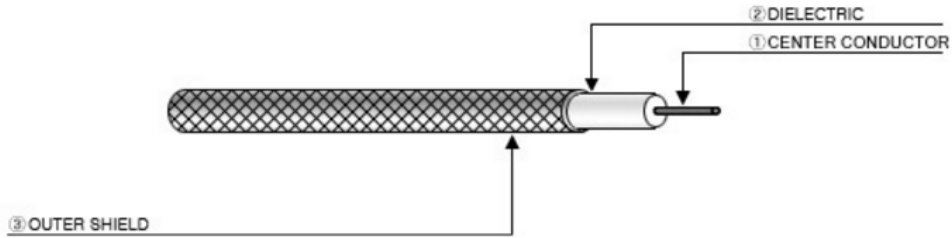
Scope	Item			Specification
Electrical Properties	Operating Frequency Range (GHz) : Max			20 GHz
	Impedance (Ohm)			50 ± 2
	Capacitance			32 pF/ft
	Velocity Propagation			69.5 %
Material & Construction	Structure	Size (mm)	Material	
	1 Center Conductor	0.54±0.005	SPC	
	2 Dielectric	1.68±0.050	PTFE	
	3 Outer Shield	2.18±0.025	TC	
Mechanical And Environmental Performance	Weight (g/m)			16.0
	Operating Temperature Range (°C)			-40~+125
Attenuation values	Freq MHz	dB /M	Average power (Watts)	
	500	0.49	37.4	
	1000	0.72	25.2	
	5000	1.64	10.8	
	10000	2.62	7.4	
	20000	4.27	-	

### ■ Cable Specification



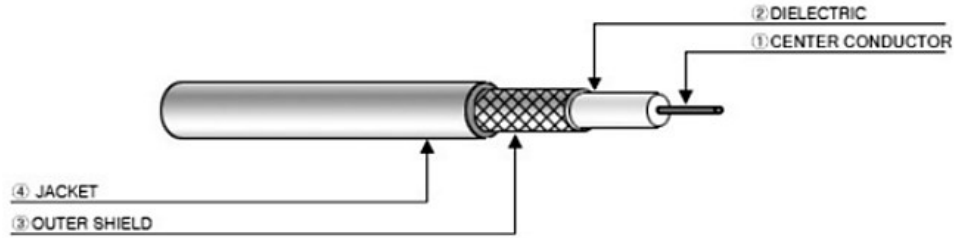
Scope	Item			Specification
Electrical Properties	Operating Frequency Range (GHz) : Max			20 GHz
	Impedance (Ohm)			50 ± 2
	Capacitance			32 pF/ft
	Velocity Propagation			69.5 %
Material & Construction	Structure	Size (mm)	Material	
	1 Center Conductor	0.54±0.005	SPC	
	2 Dielectric	1.68±0.050	PTFE	
	3 Outer Shield	2.18±0.025	TC	
4 Jacket (BLUE)	2.80			
Mechanical And Environmental Performance	Weight (g/m)			16.0
	Operating Temperature Range (°C)			-40~+125
Attenuation values	Freq MHz	dB /M	Average power (Watts)	
	500	0.49	37.4	
	1000	0.72	25.2	
	5000	1.64	10.8	
	10000	2.62	7.4	
	20000	4.27	-	

### ■ Cable Specification



Scope	Item			Specification
Electrical Properties	Operating Frequency Range (GHz) : Max			20 GHz
	Impedance (Ohm)			50 ± 2
	Capacitance			29.9 pF/ft
	Velocity Propagation			69.5 %
Material & Construction	Structure	Size (mm)	Material	
	1 Center Conductor	0.95±0.013	SPC	
	2 Dielectric	2.98±0.050	PTFE	
3 Outer Shield	3.58±0.050	TC		
Mechanical And Environmental Performance	Weight (g/m)			45.0
	Operating Temperature Range (°C)			-40~+125
Attenuation values	Freq MHz	dB /M	Average power (Watts)	
	500	0.26	600	
	1000	0.72	450	
	5000	1.64	180	
	10000	2.62	120	
	20000	4.27	70	

### ■ Cable Specification



Scope	Item			Specification
Electrical Properties	Operating Frequency Range (GHz) : Max			20 GHz
	Impedance (Ohm)			50 ± 2
	Capacitance			29.9 pF/ft
	Velocity Propagation			69.5 %
Material & Construction	Structure	Size (mm)	Material	
	1 Center Conductor	0.95±0.013	SPC	
	2 Dielectric	2.98±0.050	PTFE	
	3 Outer Shield	3.58±0.050	TC	
4 Jacket (BLUE)	4.20	FEP		
Mechanical And Environmental Performance	Weight (g/m)			45.0
	Operating Temperature Range (°C)			-40~+125
Attenuation values	Freq MHz	dB /M	Average power (Watts)	
	500	0.26	600	
	1000	0.72	450	
	5000	1.64	180	
	10000	2.62	120	
	20000	4.27	70	



### ■ Cable Specification



Scope	Item			Specification
Electrical Properties	Operating Frequency Range (GHz) : Max			18 GHz
	Impedance (Ohm)			50 ± 3
	Capacitance			29.9 pF/ft
	Velocity Propagation			69.5 %
Material & Construction	Structure	Size (mm)	Material	
	1 Center Conductor	1.65±0.03	SPC	
	2 Dielectric	5.35±0.05	PTFE	
	3 Outer Shield	6.30±0.05	TC	
	4 Jacket(Optional)	7.10±0.05	PVC/PE	
Mechanical And Environmental Performance	Weight (g/m)			114.0
	Operating Temperature Range (°C)			-40~+125
Attenuation values	Freq MHz	dB /M	Average power (Watts)	
	500	0.15	1,800	
	2000	0.37	1,050	
	5000	0.52	435	
	10000	1.08	282	