

Super-flexible microwave cable

FlexStable®

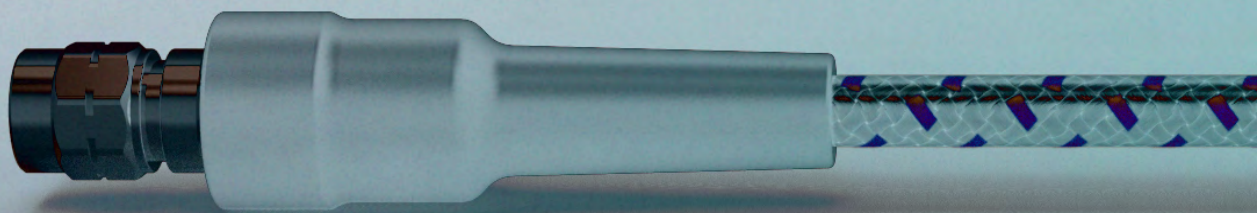


Ultra
low-loss

Phase &
loss stable

High shielding
effectiveness

DC to 50GHz (Ready)
DC to 70GHz (To be released soon)



 **SENSORVIEW**

Invented for 5G / Product catalog, 2020 (e2)



Invented for 5G

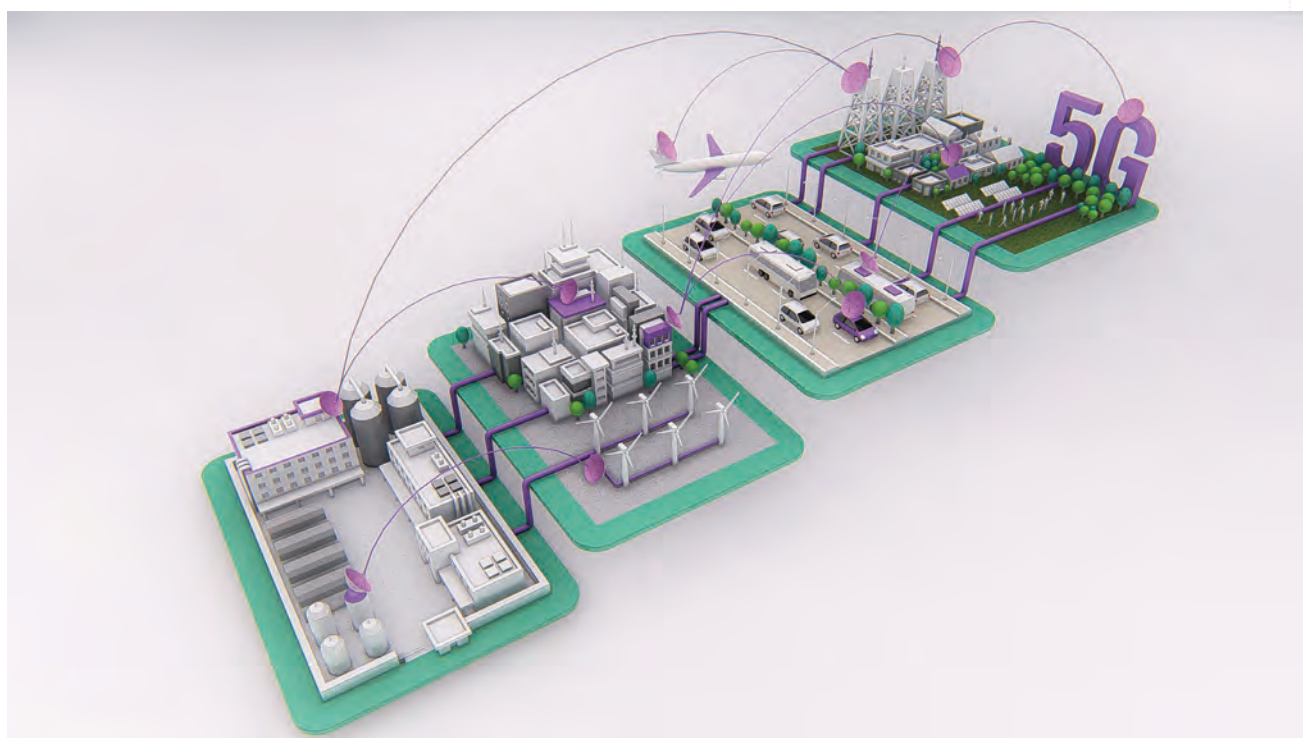
- mmWave Antenna
- Microwave Cable
- Value adding new Material

Product catalog 2019

- AeroFlon® | Microwave cable
- Phase Matched Adapter
- Precision Connector & Adapter

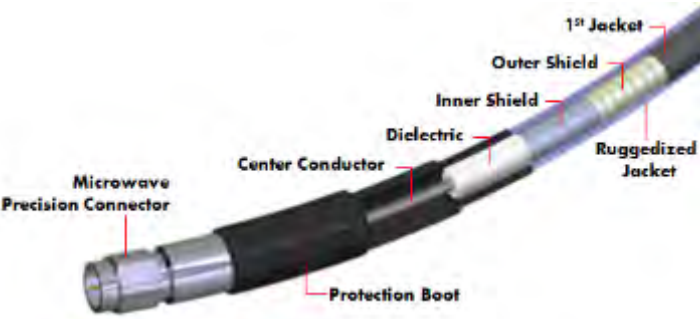
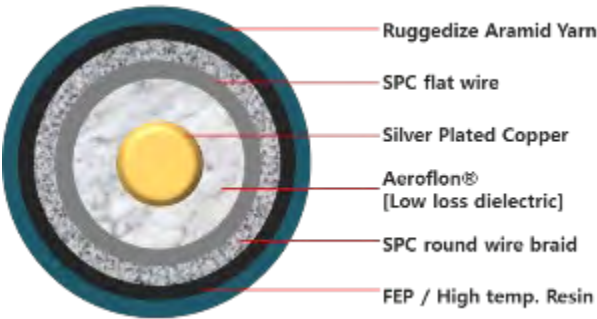
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SENSORVIEW is the manufacturer of cable and connector solutions for microwave & millimeter wave Interconnect systems. We offer stable and special coaxial cable assemblies with excellent performance.

Structures



- **Ruggedized Flexible Low Loss Cable series**
 - Aramid Yarn Jacket / High abrasion resistance
 - High temperature strength / High durability
 - High Operating Frequency / Phase and I/L stability

Aeroflon® Dielectric

For low loss and stable electrical performance

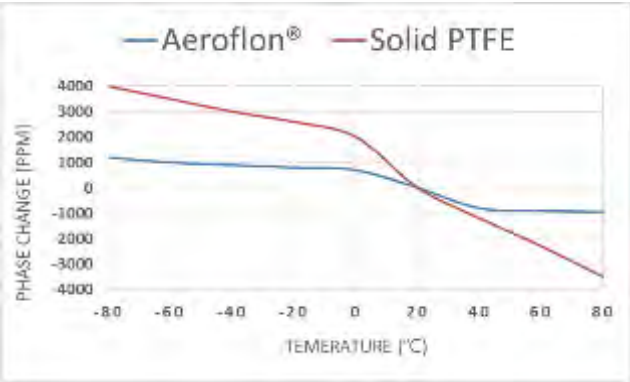
Sensorview developed porous PTFE dielectric for the low loss microwave coaxial cable assemblies to obtain a dielectric constant as close as possible to air-dielectric.

Low loss, low density dielectrics range in dielectric constant from 1.6~1.7 and have a loss tangent of 0.0001. So Sensorview low loss coaxial cable is much lower loss at microwave frequency than general solid PTFE offers.



Thermally, Sensorview’s Aeroflon® have a smaller “knee” in their CTE profile around room temp. Unlike solid PTFE dielectrics, they remain stable when exposed to extreme temperatures, allowing Them to be used for higher power applications.

PTFE Knee Graph



- Low insertion loss
- Phase stable vs Temperature
- Insertion loss stable vs bend
- Phase stable vs bend
- Low VSWR up to 40GHz

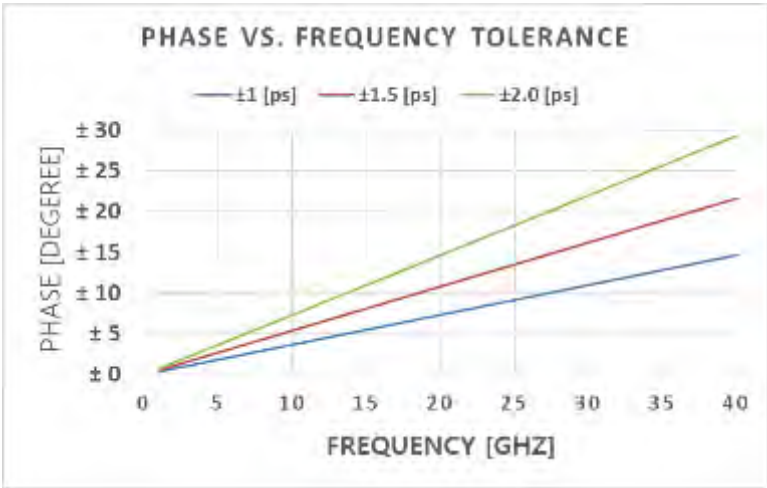
Relative matching

Consists of matching two(one pair) or more assemblies relative to each other. So cable assemblies that are ordered as sets with relative phase tolerance. Sensorview's default phase matching tolerance is $\pm 0.3^{\circ}/\text{GHz}$. (e.g. an 18GHz cable can be phase matched to $\pm 9^{\circ}$)

Absolute matching

Consists of matching assemblies to an absolute electrical length (Group delay). Sensorview precision cutting tools that can achieve very close tolerance in phase matched sets with precision coaxial connectors.

Phase vs. time vs. Frequency

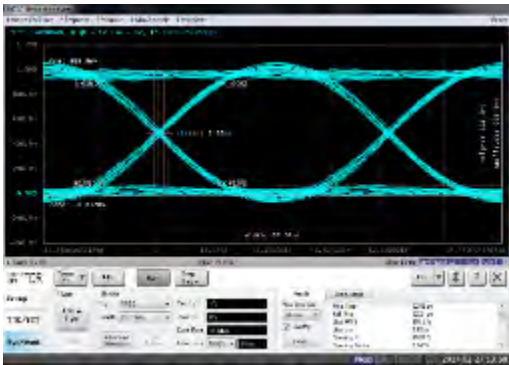


Test Data

Eye Pattern



Cable 1 : SMA(m) – 13A26 – SMA(m) – 39.4 inch



Cable 2 : SMA(m) – 13A26 – SMA(m) – 39.4 inch

Tr / Tf (skew)

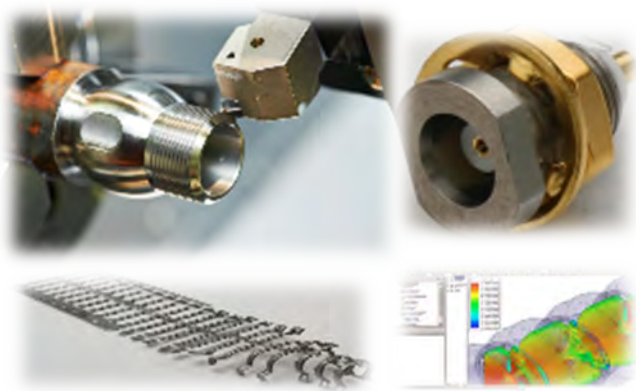
	Cable 1	Cable 2	Δ [ps]
Rise Time[ps]	32.63	32.66	0.03
Fall Time[ps]	32.24	32.24	0



SENSORVIEW coaxial connectors are designed and fabricated to guarantee optimized performance of the end products. We can provide the optimum transition for low return loss. Specially we can tailor connectors to specific equipment and application needs.

Connector technologies

- FEM analysis for impedance matching
- Milling & Plating
- Molding & Polishing
- Stamping & Soldering
- Characterization
- Laser, Ultrasonic, Sealing



Coaxial connector & adapter series

Coaxial Connector

Frequency [GHz]	Connector	Application
DC ~ 40GHz	2.92mm (K)	Panel Mount, package
DC ~ 33GHz	HFSMA®	Panel Mount, package
DC ~ 26.5GHz	SMP	Board to Board
DC ~ 18GHz	SMA, N	End Launch, package
DC ~ 6GHz	MCX, MMCX, etc.	PCB Mount, package



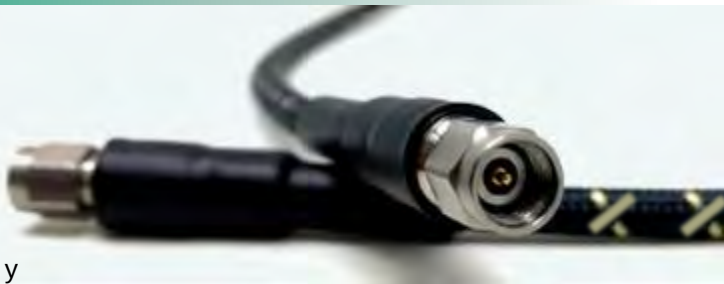
Coaxial Adapter

Frequency [GHz]	Interface	VSWR Max.
DC ~ 50GHz	2.4mm, SMPM	<1.25
DC ~ 40GHz	2.92mm (K), SMP	<1.25
DC ~ 33GHz	HFSMA®	<1.25
DC ~ 26.5GHz	HFSMA®, SMP	<1.22
DC ~ 18GHz	SMA, N	<1.2
DC ~ 6GHz	MCX, MMCX, etc.	<1.2

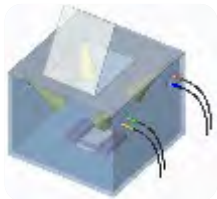


SENSORVIEW HFSMA® offers an extended frequency SMA range up to 33GHz. HFSMA® series mates with the standard SMA, 3.5mm, 2.92mm(K) and maintains the same mechanical interface.

Sensorview developed and commercialized its own dielectric material, AeroFlon® which became our signature series of microwave cable. This material with our own processing technology enables AeroFlon® series secure low loss, stability for IL & Phase, ultra flexibility, smaller bend radius.



Where to use



- ✓ OTA(Over-The-air) chamber
- ✓ Shield box



- ✓ Network analyzer
- ✓ RF Test lab / line

Line-up

Operating Frequency	Line-up	Part Name	Max. Insertion Loss		Available Connector					
			[dB/m] @ Max Freq.	[dB/ft.] @ Max Freq.	N	SMA	3.5mm	HFSMA	2.92mm	2.4mm
DC to 8 GHz	11G series	11S8GD, 11S8G, 11U8G, 11F8G, 11A8GD, 11A8G	- 0.91	- 0.278	○	○				
DC to 18 GHz	13 series	13A26 13F26 13S26	- 1.25	- 0.381	○	○	○	○		○
DC to 26.5 GHz			-1.55	- 0.473		○	○	○		○
DC to 33 GHz	11 series	11S33D, 11S33, 11A33D, 11A33	- 2.00	- 0.610				○		
DC to 40 GHz	9 series	9A40, 9S40	- 2.60	- 0.793					○	○
DC to 50 GHz	7 series	7A50D	- 3.90	- 1.189						○

[25°C, at Sea Level]

Part Naming

X # # X D

1 2 3 4 5

- 1

Series No. : 7, 9, 11, 13, ...
- 2

X : Material of jacket

A : Aramid | S : resin | F : FEP | U : PUR
- 3

: Number for Max. Frequency

50 : 50GHz | 40 : 40GHz | 26 : 26.5GHz | 18 : 18GHz | 8 : 8GHz
- 4

X : Application

G : General | W : Light weight | M : Military | C : EMI shield
- 5

D : Solid type center conductor

No 'D' : Stranded type center conductor



To allow you to choose the microwave coaxial cable best suited to our needs,
Please refer the below table, and to each cable’s data sheet in the following pages.

Specifications

Mechanical									
TYPE		8GHz Low Loss (Flex)		8GHz Low Loss (Super Flex)		8GHz Low Loss (Super Flex)		8GHz Low Loss (Super Flex)	
Raw Cable Part No.		11S8GD		11S8G		11U8G		11F8G	
Center Conductor Type		Solid		Stranded		Stranded		Stranded	
Center Conductor dia. [mm]		1.12		19 / 0.225		19 / 0.225		19 / 0.225	
Outer diameter [mm]		5.20±0.1		5.20±0.1		5.20±0.1		4.90±0.1	
Minimum Bend radius [mm]		25		25		25		25	
Weight [g/m]		50.6		49.9		53.3		53.3	
Temperature range		-50°C~135°C		-50°C~135°C		-50°C~85°C		-50°C~135°C	
Electrical									
Operating Frequency		DC ~ 8GHz		DC ~ 8GHz		DC ~ 8GHz		DC ~ 8GHz	
Velocity of propagation		77% nom.		77% nom.		77% nom.		77% nom.	
RF leakage		- 100dB		- 100dB		- 100dB		- 100dB	
Bulk Cable Attenuation (Typ.)		[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]
	1 GHz	- 0.34	- 0.104	- 0.36	- 0.108	- 0.36	- 0.108	- 0.36	- 0.108
	2 GHz	- 0.49	- 0.149	- 0.51	- 0.155	- 0.51	- 0.155	- 0.51	- 0.155
	3 GHz	- 0.61	- 0.185	- 0.63	- 0.192	- 0.63	- 0.192	- 0.63	- 0.192
	4 GHz	- 0.71	- 0.216	- 0.73	- 0.224	- 0.73	- 0.224	- 0.73	- 0.224
	5 GHz	- 0.80	- 0.243	- 0.83	- 0.252	- 0.83	- 0.252	- 0.83	- 0.252
	6 GHz	- 0.88	- 0.268	- 0.91	- 0.278	- 0.91	- 0.278	- 0.91	- 0.278
	8 GHz	- 1.03	- 0.314	- 1.07	- 0.325	- 1.07	- 0.325	- 1.07	- 0.325
Average Power Rating [W] @ 25°C, at Sea Level									
1 GHz		561		505		505		505	
2 GHz		397		357		357		357	
3 GHz		324		292		292		292	
4 GHz		281		253		253		253	
5 GHz		251		226		226		226	
6 GHz		229		206		206		206	
8 GHz		198		178		178		178	

To allow you to choose the microwave coaxial cable best suited to our needs,
Please refer the below table, and to each cable’s data sheet in the following pages.

Specifications

Mechanical					
TYPE		8GHz Low Loss (Flex) Aramid Jacket		8GHz Low Loss (Super Flex) Aramid Jacket	
Raw Cable Part No.		11A8GD		11A8G	
Center Conductor Type		Solid		Stranded	
Center Conductor dia. [mm]		1.12		19 / 0.225	
Outer diameter [mm]		5.80±0.1		5.80±0.1	
Minimum Bend radius [mm]		25		25	
Weight [g/m]		54		53.3	
Temperature range		-50°C~135°C		-50°C~135°C	
Electrical					
Operating Frequency		DC ~ 8GHz		DC ~ 8GHz	
Velocity of propagation		77% nom.		77% nom.	
RF leakage		- 100dB		- 100dB	
Bulk Cable Attenuation (Typ.)		[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]
	1 GHz	- 0.34	- 0.104	- 0.36	- 0.108
	2 GHz	- 0.49	- 0.149	- 0.51	- 0.155
	3 GHz	- 0.61	- 0.185	- 0.63	- 0.192
	4 GHz	- 0.71	- 0.216	- 0.73	- 0.224
	5 GHz	- 0.80	- 0.243	- 0.83	- 0.252
	6 GHz	- 0.88	- 0.268	- 0.91	- 0.278
	8 GHz	- 1.03	- 0.314	- 1.07	-0.325
Average Power Rating [W] @ 25°C, at Sea Level					
1 GHz		561		505	
2 GHz		397		357	
3 GHz		324		292	
4 GHz		281		253	
5 GHz		251		226	
6 GHz		229		206	
8 GHz		198		178	

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Specifications

Mechanical							
TYPE		26.5GHz Low Loss		26.5GHz Low Loss (Super Flex)		26.5GHz Low Loss (Super Flex) Aramid Jacket	
Raw Cable Part No.		13F26		13S26		13A26	
Center Conductor Type		Stranded		Stranded		Stranded	
Center Conductor dia. [mm]		19 / 0.287		19 / 0.287		19 / 0.287	
Outer diameter [mm]		5.70±0.1		6.20±0.1		6.70±0.1	
Minimum Bend radius [mm]		30		30		30	
Weight [g/m]		56.2		73.4		81.4	
Temperature range		-50°C~125°C		-50°C~135°C		-50°C~135°C	
Electrical							
Operating Frequency		DC ~ 26.5GHz		DC ~ 26.5GHz		DC ~ 26.5GHz	
Velocity of propagation		77% nom.		77% nom.		77% nom.	
RF leakage		- 100dB		- 100dB		- 100dB	
Bulk Cable Attenuation (Typ.)		[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]
	1 GHz	- 0.25	- 0.076	- 0.25	- 0.076	- 0.25	- 0.076
	3 GHz	- 0.45	- 0.137	- 0.45	- 0.137	- 0.45	- 0.137
	6 GHz	- 0.65	- 0.198	- 0.65	- 0.198	- 0.65	- 0.198
	10 GHz	- 0.88	- 0.268	- 0.88	- 0.268	- 0.88	- 0.268
	12 GHz	- 0.97	- 0.296	- 0.97	- 0.296	- 0.97	- 0.296
	18 GHz	- 1.25	- 0.381	- 1.25	- 0.381	- 1.25	- 0.381
	26.5 GHz	- 1.55	- 0.473	- 1.55	- 0.473	- 1.55	- 0.473
Average Power Rating [W] @ 25°C, at Sea Level							
1 GHz		696		665		665	
6 GHz		285		272		272	
10 GHz		220		211		211	
12 GHz		201		192		192	
18 GHz		164		157		157	
26.5 GHz		136		130		130	

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Specifications

Mechanical									
TYPE		33GHz Low Loss (Flex)		33GHz Low Loss (Super Flex)		33GHz Low Loss (Flex) Aramid Jacket		33GHz Low Loss (Super Flex) Aramid Jacket	
Raw Cable Part No.		11S33D		11S33		11A33D		11A33	
Center Conductor Type		Solid		Stranded		Solid		Stranded	
Center Conductor dia. [mm]		1.12		19 / 0.225		1.12		19 / 0.225	
Outer diameter [mm]		5.30±0.1		5.30±0.1		5.80±0.1		5.80±0.1	
Minimum Bend radius [mm]		25		25		25		25	
Weight [g/m]		53.2		52.9		59.2		58.9	
Temperature range		-50℃~135℃		-50℃~135℃		-50℃~135℃		-50℃~135℃	
Electrical									
Operating Frequency		DC ~ 33GHz		DC ~ 33GHz		DC ~ 33GHz		DC ~ 33GHz	
Velocity of propagation		77% nom.		77% nom.		77% nom.		77% nom.	
RF leakage		- 100dB		- 100dB		- 100dB		- 100dB	
Bulk Cable Attenuation (Typ.)		[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]
	1 GHz	- 0.31	- 0.095	- 0.33	- 0.101	- 0.31	- 0.095	- 0.33	- 0.101
	3 GHz	- 0.55	- 0.168	- 0.56	- 0.171	- 0.55	- 0.168	- 0.56	- 0.171
	6 GHz	- 0.67	- 0.204	- 0.75	- 0.229	- 0.67	- 0.204	- 0.75	- 0.229
	12 GHz	- 1.05	- 0.320	- 1.07	- 0.326	- 1.05	- 0.320	- 1.07	- 0.326
	18 GHz	- 1.30	- 0.396	- 1.40	- 0.427	- 1.30	- 0.396	- 1.40	- 0.427
	26.5 GHz	- 1.62	- 0.494	- 1.73	- 0.527	- 1.62	- 0.494	- 1.73	- 0.527
	28 GHz	- 1.70	- 0.518	- 1.79	- 0.546	- 1.70	- 0.518	- 1.79	- 0.546
33 GHz	- 1.85	- 0.564	- 2.00	- 0.610	- 1.85	- 0.564	- 2.00	- 0.610	
Average Power Rating [W] @ 25℃, at Sea Level									
1 GHz		561		505		561		505	
3 GHz		324		292		324		292	
6 GHz		229		206		229		206	
12 GHz		162		146		162		146	
18 GHz		133		119		133		119	
28 GHz		106		96		106		96	
33 GHz		98		88		98		88	

To allow you to choose the microwave coaxial cable best suited to our needs,
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Specifications

Mechanical		
TYPE	40GHz Low Loss (Super Flex)	40GHz Low Loss (Super Flex) Aramid Jacket
Raw Cable Part No.	9S40	9A40
Center Conductor Type	Stranded	Stranded
Center Conductor dia. [mm]	19 / 0.18	19 / 0.18
Outer diameter [mm]	5.00±0.1	5.6±0.1
Minimum Bend radius [mm]	25	25
Weight [g/m]	44.4	48.6
Temperature range	-50°C~135°C	-50°C~135°C

Electrical					
Operating Frequency		DC ~ 40GHz		DC ~ 40GHz	
Velocity of propagation		77% nom.		77% nom.	
RF leakage		- 100dB		- 100dB	
Bulk Cable Attenuation (Typ.)		[dB/m]	[dB/ft.]	[dB/m]	[dB/ft.]
	1 GHz	- 0.34	- 0.104	- 0.34	- 0.104
	3 GHz	- 0.62	- 0.189	- 0.62	- 0.189
	6 GHz	- 0.88	- 0.268	- 0.88	- 0.268
	12 GHz	- 1.30	- 0.396	- 1.30	- 0.396
	18 GHz	- 1.65	- 0.503	- 1.65	- 0.503
	26.5 GHz	- 2.03	- 0.619	- 2.03	- 0.619
	28 GHz	- 2.10	- 0.640	- 2.10	- 0.640
	40 GHz	- 2.60	- 0.793	- 2.60	- 0.793

Average Power Rating [W] @ 25°C, at Sea Level		
1 GHz	369	369
3 GHz	213	213
6 GHz	151	151
12 GHz	107	107
18 GHz	87	87
28 GHz	70	70
40 GHz	59	59

To allow you to choose the microwave coaxial cable best suited to our needs,
Please refer the below table, and to each cable’s data sheet in the following pages.

Specifications

Mechanical			
TYPE		50GHz Low Loss (Flex) Aramid Jacket	
Raw Cable Part No.		7A50D	
Center Conductor Type		Solid	
Center Conductor dia. [mm]		0.7	
Outer diameter [mm]		4.6±0.1	
Minimum Bend radius [mm]		20	
Weight [g/m]		34.1	
Temperature range		-50℃~135℃	
Electrical			
Operating Frequency		DC ~ 50GHz	
Velocity of propagation		77% nom.	
RF leakage		- 100dB	
Bulk Cable Attenuation (Typ.)		[dB/m]	[dB/ft.]
	1 GHz	-0.44	-0.134
	3 GHz	-0.78	-0.237
	6 GHz	-1.14	-0.347
	12 GHz	-1.67	-0.509
	28 GHz	-2.73	-0.832
	40 GHz	-3.38	-1.031
	50 GHz	-3.90	-1.189
Average Power Rating [W] @ 25℃, at Sea Level			
1 GHz		320	
3 GHz		185	
6 GHz		131	
12 GHz		93	
28 GHz		61	
40 GHz		51	
50 GHz		45	

Construction

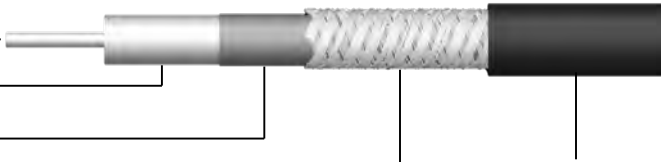
Center Conductor

Aeroflon®

1st Shield(Vertical Tape)

2nd Shield(Round wire)

Jacket



Part		Material	Diameter
1	Center Conductor	Silver Plated Copper [Solid]	Φ 1.12 [mm] Φ 0.044 [inch]
2	Dielectric	Aeroflon® [Extruded]	
3	1 st / 2 nd Shield	Mylar tape & Copper wire	
4	Jacket	High Temperature Resin	Φ 5.20 ± 0.1 [mm] Φ 0.204 ± 0.003 [inch]

Electrical & Mechanical specification

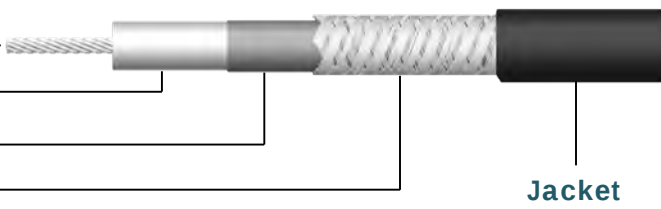
Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 8 GHz
Temperature	-50 °C ~ + 135 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	25 mm / 0.98 inch
Weight [g/m]	50.6
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	2° max. @8GHz
Loss Stability vs. Flexure	Δ 0.05dB to 8GHz
Available Connector	SMA / N

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.34	- 0.104	1 GHz	561
2 GHz	- 0.49	- 0.149	2 GHz	397
3 GHz	- 0.61	- 0.185	3 GHz	324
4 GHz	- 0.71	- 0.216	4 GHz	281
5 GHz	- 0.80	- 0.243	5 GHz	251
6 GHz	- 0.88	- 0.268	6 GHz	229
8 GHz	- 1.03	- 0.314	8 GHz	198

Microwave Cable

DC ~ 8GHz phase stable cable

Construction

Center Conductor Aeroflon® 1st Shield(Vertical Tape) 2nd Shield(Round wire) Jacket 			
Part		Material	Diameter
1	Center Conductor	Silver Plated Copper [Stranded]	Φ 19 / 0.225 [mm] Φ 19 / 0.0088 [inch]
2	Dielectric	Aeroflon® [Extruded]	
3	1 st / 2 nd Shield	Mylar tape & Copper wire	
4	Jacket	High Temperature Resin	Φ 5.20 ± 0.1 [mm] Φ 0.204 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 8 GHz
Temperature	-50 °C ~ + 135 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	25 mm / 0.98 inch
Weight [g/m]	49.9
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	2° max. @8GHz
Loss Stability vs. Flexure	Δ 0.05dB to 8GHz
Available Connector	SMA / N

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.36	- 0.108	1 GHz	505
2 GHz	- 0.51	- 0.155	2 GHz	357
3 GHz	- 0.63	- 0.192	3 GHz	292
4 GHz	- 0.73	- 0.224	4 GHz	253
5 GHz	- 0.83	- 0.252	5 GHz	226
6 GHz	- 0.91	- 0.278	6 GHz	206
8 GHz	- 1.07	- 0.325	8 GHz	178

Microwave Cable

DC ~ 8GHz phase stable cable

Construction

Center Conductor

AeroFlon®

1st Shield(Vertical Tape)

2nd Shield(Round wire)



Ruggedized Aramid Jacket

Jacket

Part		Material	Diameter
1	Center Conductor	Silver Plated Copper [Solid]	Φ 1.12 [mm] Φ 0.044 [inch]
2	Dielectric	AeroFlon® [Extruded]	
3	1 st / 2 nd Shield	Mylar tape & Copper wire	
4	Jacket	Ruggedized Aramid Yarn	Φ 5.80 ± 0.1 [mm] Φ 0.228 ± 0.003 [inch]

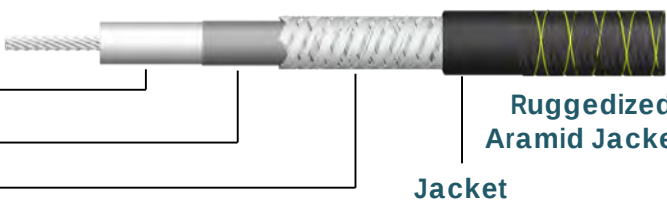
Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω				
Operating Frequency	DC to 8 GHz				
Temperature	-50 °C ~ +135 °C				
Velocity of Propagation	77% nominal				
Minimum Bend Radius	25 mm / 0.98 inch				
Weight [g/m]	54				
Shielding Effectiveness	<-100 dB				
Phase Stability vs. Flexure	2° max. @8GHz				
Loss Stability vs. Flexure	Δ 0.05dB to 8GHz				
Available Connector	SMA / N				
Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]		
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]	
1 GHz	- 0.34	- 0.104	1 GHz	561	
2 GHz	- 0.49	- 0.149	2 GHz	397	
3 GHz	- 0.61	- 0.185	3 GHz	324	
4 GHz	- 0.71	- 0.216	4 GHz	281	
5 GHz	- 0.80	- 0.243	5 GHz	251	
6 GHz	- 0.88	- 0.268	6 GHz	229	
8 GHz	- 1.03	- 0.314	8 GHz	198	

Microwave Cable

DC ~ 8GHz phase stable cable

Construction

Center Conductor AeroFlon® 1st Shield(Vertical Tape) 2nd Shield(Round wire) Ruggedized Aramid Jacket Jacket 		
Part		Diameter
1	Center Conductor	Silver Plated Copper [Stranded] Φ 19 / 0.225 [mm] Φ 19 / 0.0088 [inch]
2	Dielectric	AeroFlon® [Extruded]
3	1 st / 2 nd Shield	Mylar tape & Copper wire
4	Jacket	Ruggedized Aramid Yarn Φ 5.70 ± 0.1 [mm] Φ 0.228 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω		
Operating Frequency	DC to 8 GHz		
Temperature	-50 °C ~ +135 °C		
Velocity of Propagation	77% nominal		
Minimum Bend Radius	25 mm / 0.98 inch		
Weight [g/m]	53.3		
Shielding Effectiveness	<-100 dB		
Phase Stability vs. Flexure	2° max. @8GHz		
Loss Stability vs. Flexure	Δ 0.05dB to 8GHz		
Available Connector	SMA / N		

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.36	- 0.108	1 GHz	505
2 GHz	- 0.51	- 0.155	2 GHz	357
3 GHz	- 0.63	- 0.192	3 GHz	292
4 GHz	- 0.73	- 0.224	4 GHz	253
5 GHz	- 0.83	- 0.252	5 GHz	226
6 GHz	- 0.91	- 0.278	6 GHz	206
8 GHz	- 1.07	- 0.325	8 GHz	178

Microwave Cable

DC ~ 8GHz phase stable cable

Construction

Center Conductor Aeroflon® 1st Shield(Flat wire) 2nd Shield(Round wire)  Jacket		
Part		Diameter
1	Center Conductor	Silver Plated Copper [Stranded] Φ 19 / 0.287 [mm] Φ 19 / 0.0113 [inch]
2	Dielectric	Aeroflon® [Extruded]
3	1 st / 2 nd Shield	Silver Plated Copper
4	Jacket	FEP Φ 5.70 ± 0.1 [mm] Φ 0.220 ± 0.003 [inch]

Electrical & Mechanical specification

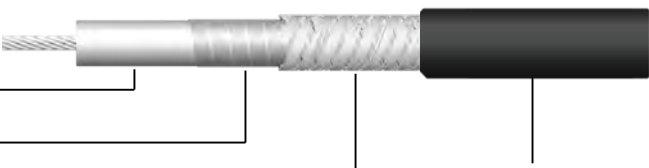
Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 26.5 GHz
Temperature	-50 °C ~ +125 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	30 mm / 1.18 inch
Weight [g/m]	56.2
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	6° max. @26.5GHz
Loss Stability vs. Flexure	Δ 0.1dB to 26.5GHz
Available Connector	3.5mm / HF SMA / SMA / N(18GHz)

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.25	- 0.076	1 GHz	696
3 GHz	- 0.45	- 0.137	3 GHz	398
6 GHz	- 0.65	- 0.198	6 GHz	285
10 GHz	- 0.88	- 0.268	10 GHz	220
12 GHz	- 0.97	- 0.296	12 GHz	201
18 GHz	- 1.25	- 0.381	18 GHz	164
26.5 GHz	- 1.55	- 0.473	26.5 GHz	136

Microwave Cable

DC ~ 26.5GHz phase stable cable

Construction

Center Conductor Aeroflon® 1st Shield(Flat wire) 2nd Shield(Round wire) Jacket 		
Part		Diameter
1	Center Conductor	Silver Plated Copper [Stranded] Φ 19 / 0.287 [mm] Φ 19 / 0.0113 [inch]
2	Dielectric	Aeroflon® [Extruded]
3	1 st / 2 nd Shield	Silver Plated Copper
4	Jacket	High Temperature Resin Φ 6.20 ± 0.1 [mm] Φ 0.244 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 26.5 GHz
Temperature	-50 °C ~ +135 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	30 mm / 1.18 inch
Weight [g/m]	73.4
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	6° max. @26.5GHz
Loss Stability vs. Flexure	Δ 0.1dB to 26.5GHz
Available Connector	3.5mm / HF SMA / SMA / N(18GHz)

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.25	- 0.076	1 GHz	665
3 GHz	- 0.45	- 0.137	3 GHz	371
6 GHz	- 0.65	- 0.198	6 GHz	272
10 GHz	- 0.88	- 0.268	10 GHz	211
12 GHz	- 0.97	- 0.296	12 GHz	192
18 GHz	- 1.25	- 0.381	18 GHz	157
26.5 GHz	- 1.55	- 0.473	26.5 GHz	130

Microwave Cable

DC ~ 26.5GHz phase stable cable

Construction

Center Conductor Aeroflon® 1st Shield(Flat wire) 2nd Shield(Round wire) Jacket Ruggedized Aramid Jacket 			
Part	Material	Diameter	
1	Center Conductor	Silver Plated Copper [Stranded]	Φ 19 / 0.287 [mm] Φ 19 / 0.0113 [inch]
2	Dielectric	Aeroflon® [Extruded]	
3	1 st / 2 nd Shield	Silver Plated Copper	
4	Jacket	Ruggedized Aramid Yarn	Φ 6.70 ± 0.1 [mm] Φ 0.263 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 26.5 GHz
Temperature	-50 °C ~ +135 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	30 mm / 1.18 inch
Weight [g/m]	81.4
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	6° max. @26.5GHz
Loss Stability vs. Flexure	Δ 0.1dB to 26.5GHz
Available Connector	3.5mm / HF SMA / SMA / N(18GHz) / 2.4mm

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.25	- 0.076	1 GHz	665
3 GHz	- 0.45	- 0.137	3 GHz	371
6 GHz	- 0.65	- 0.198	6 GHz	272
10 GHz	- 0.88	- 0.268	10 GHz	211
12 GHz	- 0.97	- 0.296	12 GHz	192
18 GHz	- 1.25	- 0.381	18 GHz	157
26.5 GHz	- 1.55	- 0.473	26.5 GHz	130

Microwave Cable

DC ~ 26.5GHz phase stable cable

Construction

Center Conductor Aeroflon® 1st Shield(Flat wire) 2nd Shield(Round wire) Jacket 		
Part		Diameter
1	Center Conductor	Silver Plated Copper [Solid] Φ 1.12 [mm] Φ 0.044 [inch]
2	Dielectric	Aeroflon® [Extruded]
3	1 st / 2 nd Shield	Silver Plated Copper
4	Jacket	High Temperature Resin Φ 5.30 ± 0.1 [mm] Φ 0.204 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω	
Operating Frequency	DC to 33 GHz	
Temperature	-50 °C ~ +135 °C	
Velocity of Propagation	77% nominal	
Minimum Bend Radius	25 mm / 0.98 inch	
Weight [g/m]	53.2	
Shielding Effectiveness	<-100 dB	
Phase Stability vs. Flexure	10° max. @33GHz	
Loss Stability vs. Flexure	Δ 0.1dB to 33GHz	
Available Connector	HF SMA	

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.31	- 0.095	1 GHz	561
3 GHz	- 0.55	- 0.168	3 GHz	324
6 GHz	- 0.67	- 0.204	6 GHz	229
12 GHz	- 1.05	- 0.320	12 GHz	162
18 GHz	- 1.30	- 0.396	18 GHz	133
28 GHz	- 1.70	- 0.518	28 GHz	106
33 GHz	- 1.85	- 0.564	33 GHz	98

Microwave Cable

DC ~ 33GHz phase stable cable

Construction

Center Conductor

Aeroflon®

1st Shield(Flat wire)

2nd Shield(Round wire)

Jacket



Part		Material	Diameter
1	Center Conductor	Silver Plated Copper [Stranded]	Φ 19 / 0.225 [mm] Φ 19 / 0.0088 [inch]
2	Dielectric	Aeroflon® [Extruded]	
3	1 st / 2 nd Shield	Silver Plated Copper	
4	Jacket	High Temperature Resin	Φ 5.30 ± 0.1 [mm] Φ 0.204 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 33 GHz
Temperature	-50 °C ~ +135 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	25 mm / 0.98 inch
Weight [g/m]	52.9
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	10° max. @33GHz
Loss Stability vs. Flexure	Δ 0.1dB to 33GHz
Available Connector	HF SMA

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.33	- 0.101	1 GHz	505
3 GHz	- 0.56	- 0.171	3 GHz	292
6 GHz	- 0.75	- 0.229	6 GHz	206
12 GHz	- 1.07	- 0.326	12 GHz	146
18 GHz	- 1.40	- 0.427	18 GHz	119
28 GHz	- 1.79	- 0.546	28 GHz	96
33 GHz	- 2.00	- 0.610	33 GHz	88

Microwave Cable

DC ~ 33GHz phase stable cable

Construction

Center Conductor Aeroflon® 1st Shield(Flat wire) 2nd Shield(Round wire)  Ruggedized Aramid Jacket Jacket		
Part		Diameter
1	Center Conductor	Silver Plated Copper [Solid] Φ 1.12 [mm] Φ 0.044 [inch]
2	Dielectric	Aeroflon® [Extruded]
3	1 st / 2 nd Shield	Silver Plated Copper
4	Jacket	Ruggedized Aramid Yarn Φ 5.80 ± 0.1 [mm] Φ 0.228 ± 0.003 [inch]

Electrical & Mechanical specification

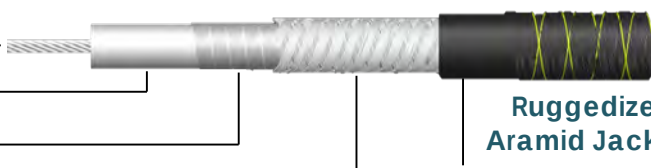
Characteristic Impedance	50 ± 1 Ω		
Operating Frequency	DC to 33 GHz		
Temperature	-50 °C ~ +135 °C		
Velocity of Propagation	77% nominal		
Minimum Bend Radius	25 mm / 0.98 inch		
Weight [g/m]	59.2		
Shielding Effectiveness	<-100 dB		
Phase Stability vs. Flexure	10° max. @33GHz		
Loss Stability vs. Flexure	Δ 0.1dB to 33GHz		
Available Connector	HF SMA		

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.31	- 0.095	1 GHz	561
3 GHz	- 0.55	- 0.168	3 GHz	324
6 GHz	- 0.67	- 0.204	6 GHz	229
12 GHz	- 1.05	- 0.320	12 GHz	162
18 GHz	- 1.30	- 0.396	18 GHz	133
28 GHz	- 1.70	- 0.518	28 GHz	106
33 GHz	- 1.85	- 0.564	33 GHz	98

Microwave Cable

DC ~ 33GHz phase stable cable

Construction

Center Conductor Aeroflon® 1st Shield(Flat wire) 2nd Shield(Round wire)  Ruggedized Aramid Jacket Jacket			
Part		Material	Diameter
1	Center Conductor	Silver Plated Copper [Stranded]	Φ 19 / 0.225 [mm] Φ 19 / 0.0088 [inch]
2	Dielectric	Aeroflon® [Extruded]	
3	1 st / 2 nd Shield	Silver Plated Copper	
4	Jacket	Ruggedized Aramid Yarn	Φ 5.80 ± 0.1 [mm] Φ 0.228 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 33 GHz
Temperature	-50 °C ~ +135 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	25 mm / 0.98 inch
Weight [g/m]	58.9
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	10° max. @33GHz
Loss Stability vs. Flexure	Δ 0.1dB to 33GHz
Available Connector	HF SMA

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.33	- 0.101	1 GHz	505
3 GHz	- 0.56	- 0.171	3 GHz	292
6 GHz	- 0.75	- 0.229	6 GHz	206
12 GHz	- 1.07	- 0.326	12 GHz	146
18 GHz	- 1.40	- 0.427	18 GHz	119
28 GHz	- 1.79	- 0.546	28 GHz	96
33 GHz	- 2.00	- 0.610	33 GHz	88

Microwave Cable

DC ~ 33GHz phase stable cable

Construction

Center Conductor

Aeroflon®

1st Shield(Flat wire)

2nd Shield(Round wire)

Jacket



Part		Material	Diameter
1	Center Conductor	Silver Plated Copper [Stranded]	Φ 19 / 0.18 [mm] Φ 19 / 0.0070 [inch]
2	Dielectric	Aeroflon® [Extruded]	
3	1 st / 2 nd Shield	Silver Plated Copper	
4	Jacket	High Temperature Resin	Φ 5.00 ± 0.1 [mm] Φ 0.188 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 40 GHz
Temperature	-50 °C ~ +135 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	25 mm / 0.98 inch
Weight [g/m]	44.4
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	12° max. @40GHz
Loss Stability vs. Flexure	Δ 0.1dB to 40GHz
Available Connector	2.92mm (K)

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.34	- 0.104	1 GHz	369
3 GHz	- 0.62	- 0.189	3 GHz	213
6 GHz	- 0.88	- 0.268	6 GHz	151
12 GHz	- 1.30	- 0.396	12 GHz	107
18 GHz	- 1.65	- 0.503	18 GHz	87
28 GHz	- 2.10	- 0.640	28 GHz	70
40 GHz	- 2.60	- 0.793	40 GHz	59

Microwave Cable

DC ~ 40GHz phase stable cable

Construction

Center Conductor Aeroflon® 1st Shield(Flat wire) 2nd Shield(Round wire)  Ruggedized Aramid Jacket Jacket			
Part		Material	Diameter
1	Center Conductor	Silver Plated Copper [Stranded]	Φ 19 / 0.18 [mm] Φ 19 / 0.0070 [inch]
2	Dielectric	Aeroflon® [Extruded]	
3	1 st / 2 nd Shield	Silver Plated Copper	
4	Jacket	Ruggedized Aramid Yarn	Φ 5.60 ± 0.1 [mm] Φ 0.212 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 40 GHz
Temperature	-50 °C ~ +135 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	25 mm / 0.98 inch
Weight [g/m]	48.6
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	12° max. @40GHz
Loss Stability vs. Flexure	Δ 0.1dB to 40GHz
Available Connector	2.92mm (K)

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.34	- 0.104	1 GHz	369
3 GHz	- 0.62	- 0.189	3 GHz	213
6 GHz	- 0.88	- 0.268	6 GHz	151
12 GHz	- 1.30	- 0.396	12 GHz	107
18 GHz	- 1.65	- 0.503	18 GHz	87
28 GHz	- 2.10	- 0.640	28 GHz	70
40 GHz	- 2.60	- 0.793	40 GHz	59

Microwave Cable

DC ~ 40GHz phase stable cable

Construction

Center Conductor Aeroflon® 1st Shield(Flat wire) 2nd Shield(Round wire) Ruggedized Aramid Jacket Jacket		
Part	Material	Diameter
1	Center Conductor	Silver Plated Copper [Solid]
2	Dielectric	Aeroflon® [Extruded]
3	1 st / 2 nd Shield	Silver Plated Copper
4	Jacket	Ruggedized Aramid Yarn
		Φ 0.7 [mm] Φ 0.027 [inch] Φ 4.60 ± 0.1 [mm] Φ 0.185 ± 0.003 [inch]

Electrical & Mechanical specification

Characteristic Impedance	50 ± 1 Ω
Operating Frequency	DC to 50 GHz
Temperature	-50 °C ~ +135 °C
Velocity of Propagation	77% nominal
Minimum Bend Radius	20 mm / 0.79 inch
Weight [g/m]	34.1
Shielding Effectiveness	<-100 dB
Phase Stability vs. Flexure	15° max. @50GHz
Loss Stability vs. Flexure	Δ 0.1dB to 50GHz
Available Connector	2.4mm

Bulk Cable Attenuation (Typ.) [25°C, at Sea Level]			Average Power Rating [CW, 25°C, at Sea Level]	
Frequency	[dB/m]	[dB/ft.]	Frequency	[Watt]
1 GHz	- 0.44	- 0.134	1 GHz	320
3 GHz	- 0.78	- 0.237	3 GHz	185
6 GHz	- 1.14	- 0.347	6 GHz	131
12 GHz	- 1.67	- 0.509	12 GHz	93
28 GHz	- 2.73	- 0.832	28 GHz	61
40 GHz	- 3.38	- 1.031	40 GHz	51
50 GHz	- 3.90	- 1.189	50 GHz	45

Microwave Cable

DC ~ 50GHz phase stable cable

11A8G Cable Assemblies

P/N	Frequency	Connector1	Connector2	VSWR	
				Typ.	Max.
SMA(m)-11A8G-SMA(m)-1M	8GHz	SMA(m)	SMA(m)	1.11	1.21
N(m)-11A8G-N(m)-1M	8GHz	N(m)	N(m)	1.18	1.29

13A26 Cable Assemblies

P/N	Frequency	Connector1	Connector2	VSWR	
				Typ.	Max.
SMA(m)-13A18-SMA(m)-1M	18GHz	SMA(m)	SMA(m)	1.13	1.23
HFSMA(m)-13A26-HFSMA(m)-1M	26.5GHz	HFSMA(m)	HFSMA(m)	1.14	1.28

11A33 Cable Assemblies

P/N	Frequency	Connector1	Connector2	VSWR	
				Typ.	Max.
HFSMA(m)-11A33-HFSMA(m)-1M	33GHz	HFSMA(m)	HFSMA(m)	1.22	1.35

9A40 Cable Assemblies

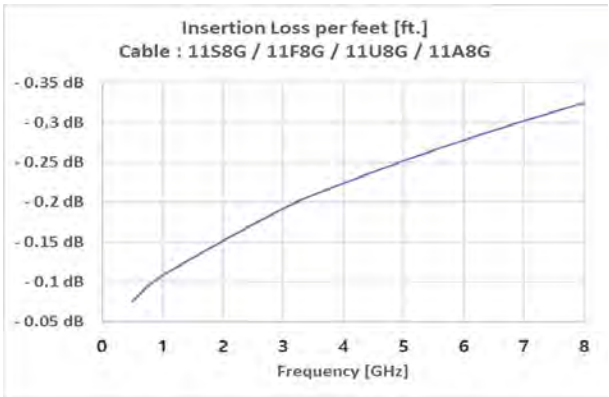
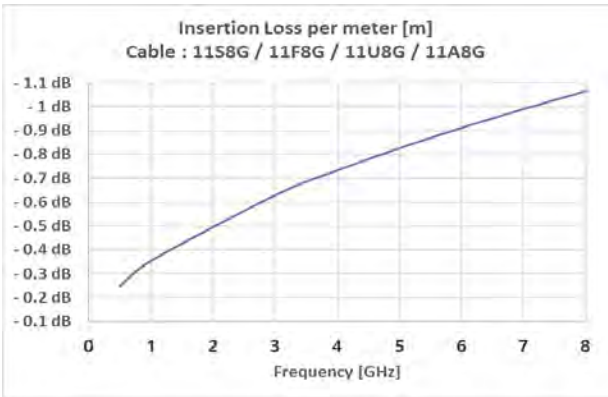
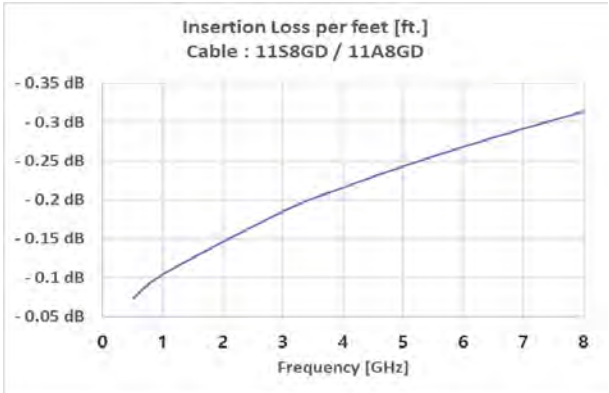
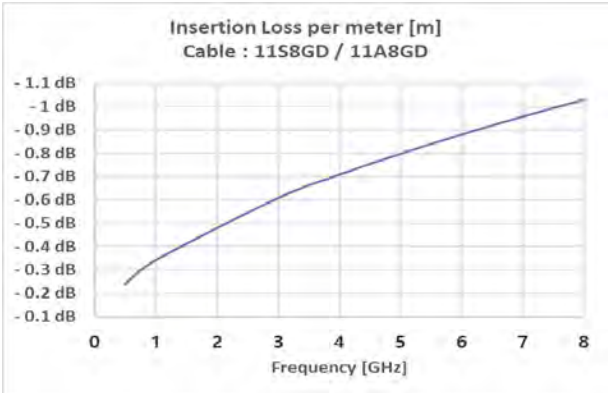
P/N	Frequency	Connector1	Connector2	VSWR	
				Typ.	Max.
2.92mm(m)-9A40-2.92mm(m)-1M	40GHz	2.92mm(m)	2.92mm(m)	1.19	1.31

7A50D Cable Assemblies

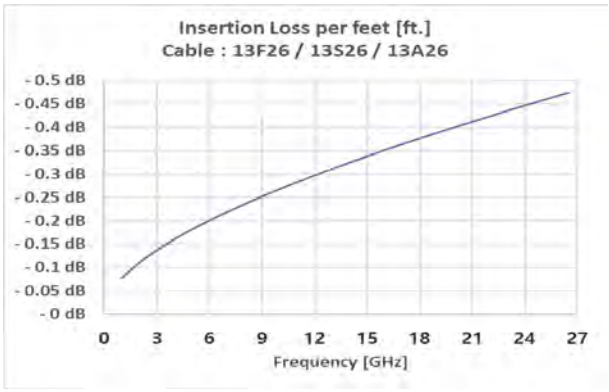
P/N	Frequency	Connector1	Connector2	VSWR	
				Typ.	Max.
2.4mm(m)-7A50D-2.4mm(m)-1M	50GHz	2.4mm(m)	2.4mm(m)	1.34	1.44

Insertion loss

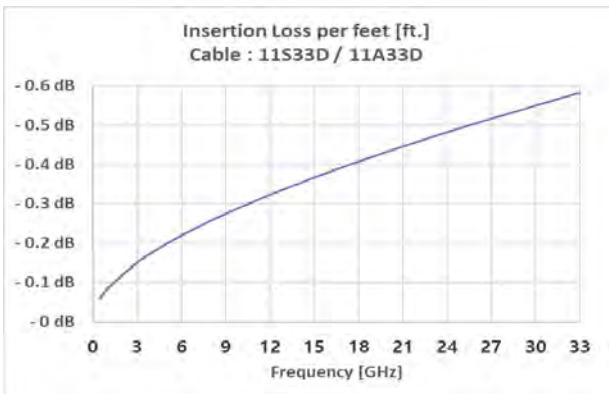
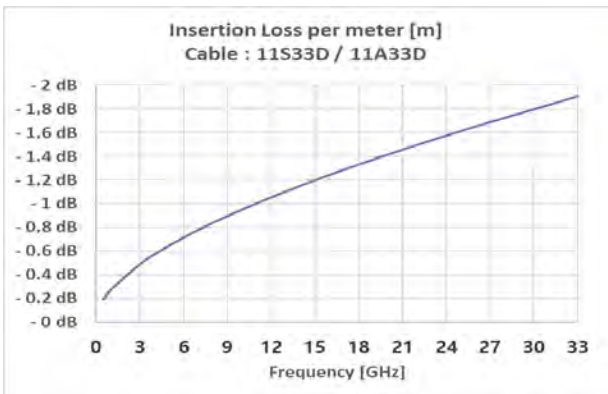
DC ~ 8GHz



DC ~ 26.5GHz

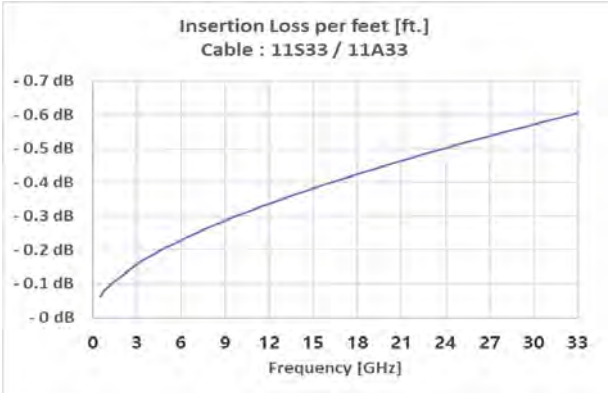
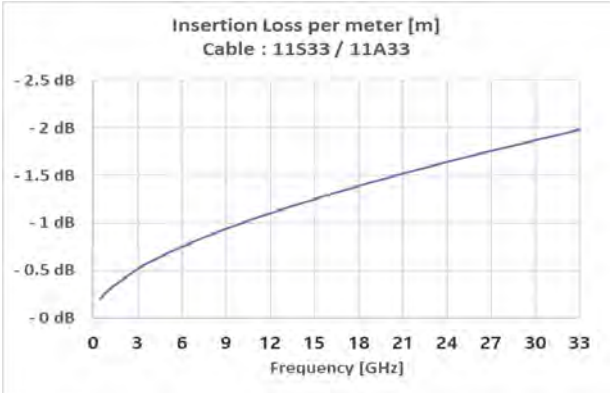


DC ~ 33GHz

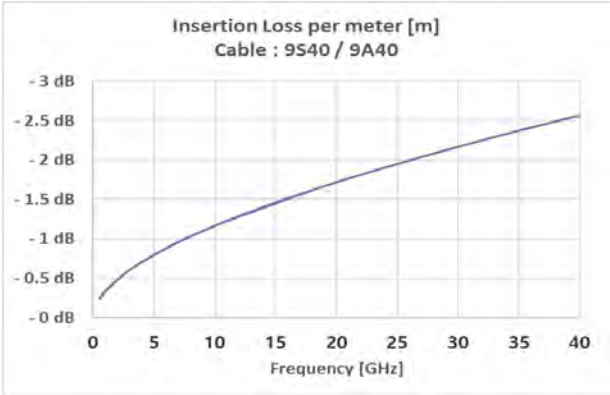


* Temperature 25°C / 1 atm (sea level)

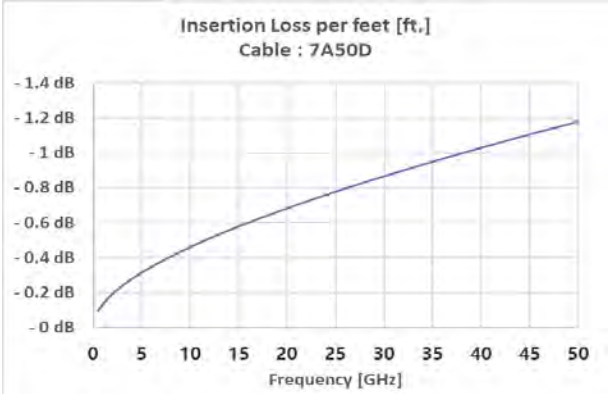
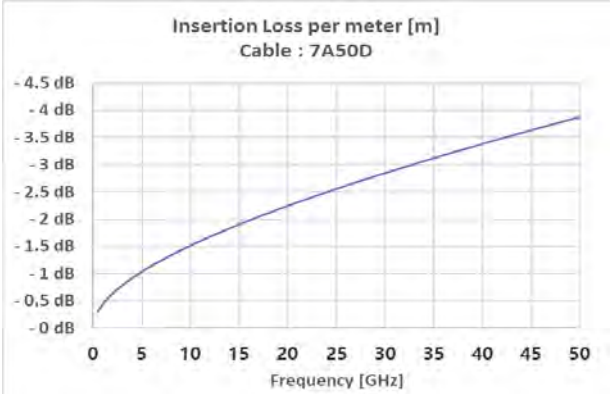
DC ~ 33GHz



DC ~ 40GHz



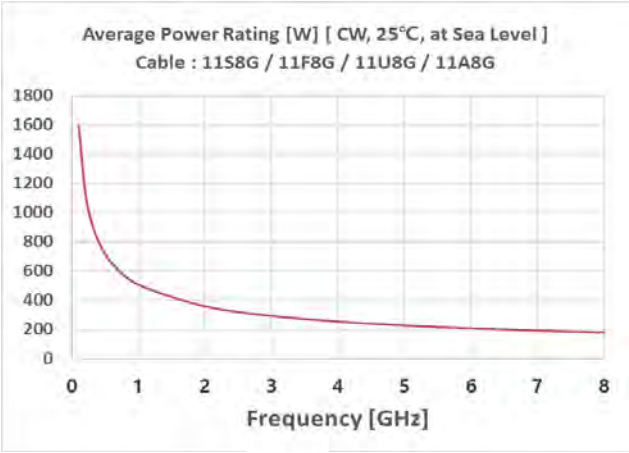
DC ~ 50GHz



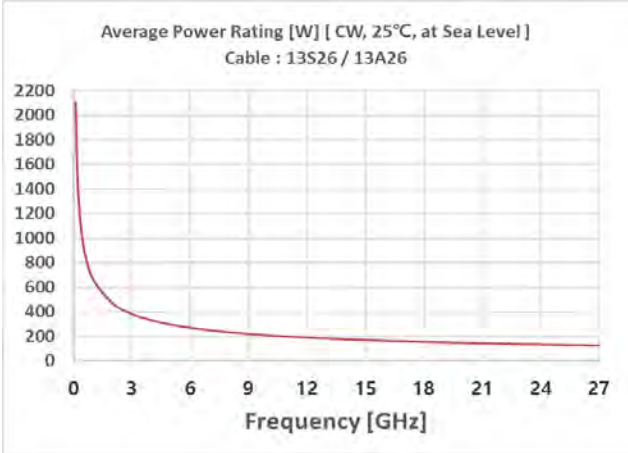
* Temperature 25°C / 1 atm (sea level)

Average Power Rating

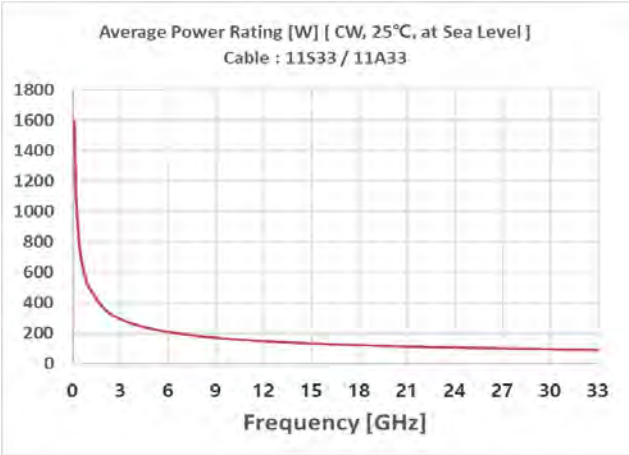
DC ~ 8GHz



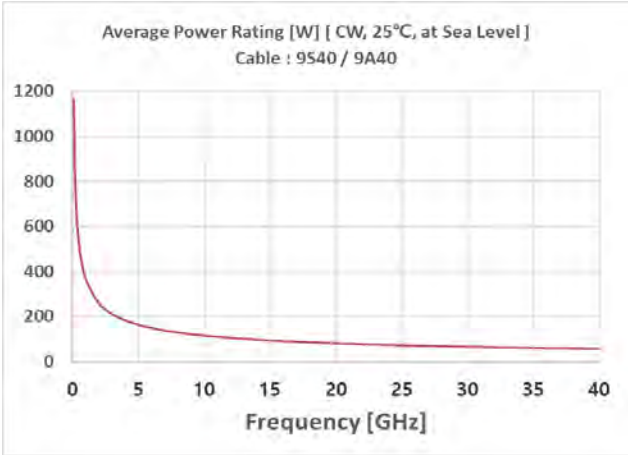
DC ~ 26.5GHz



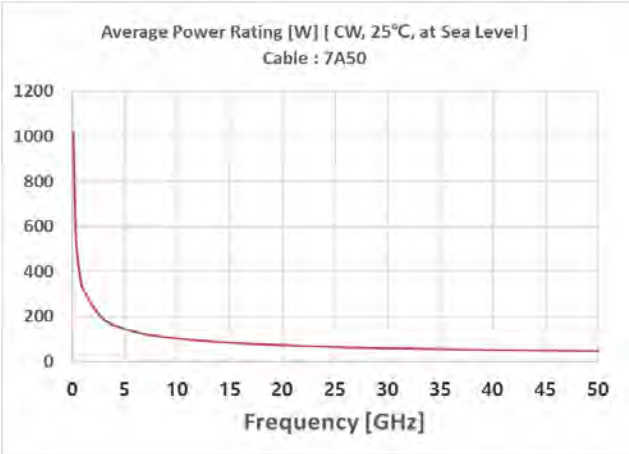
DC ~ 33GHz



DC ~ 40GHz

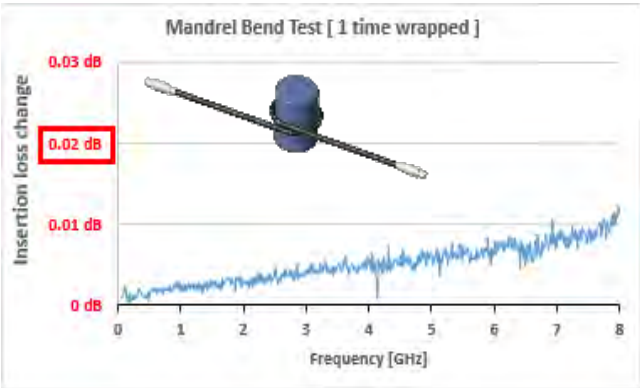


DC ~ 50GHz

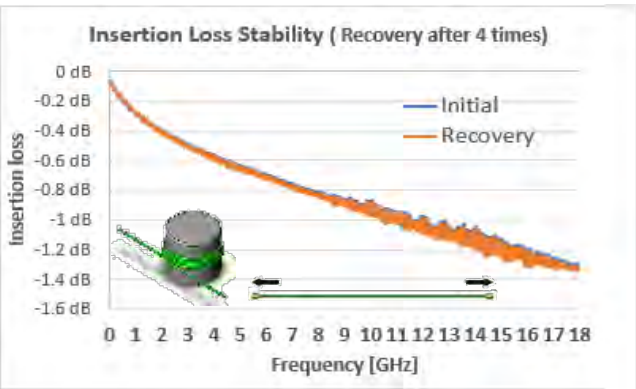
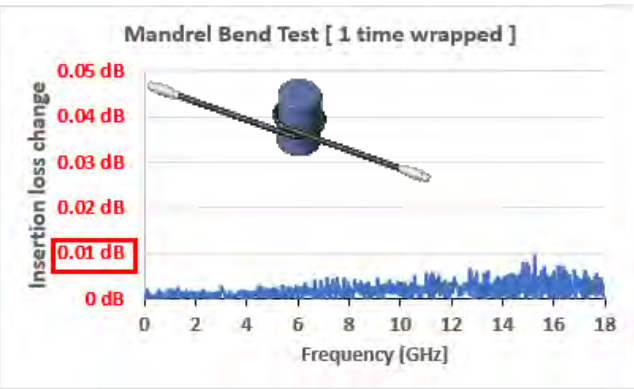


Insertion loss stability

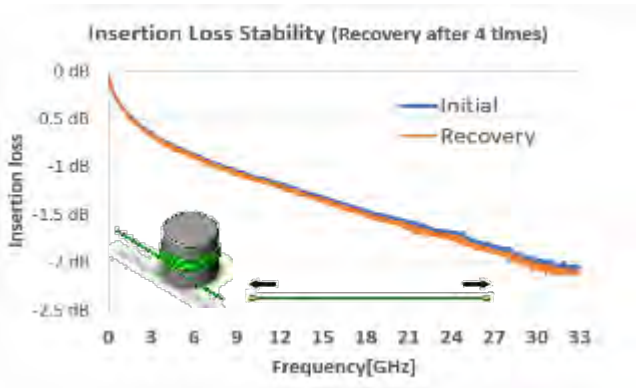
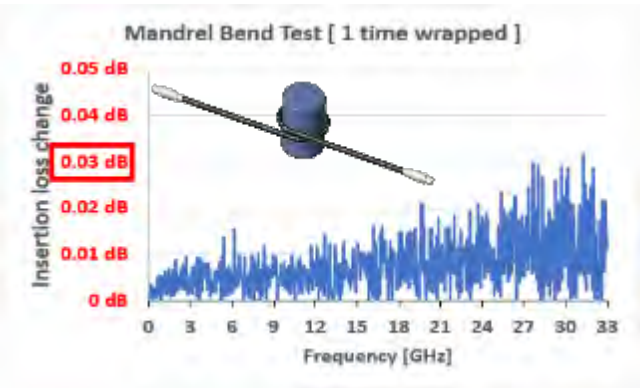
SMA(m) – 11A8G – SMA(m) – 1.0 m



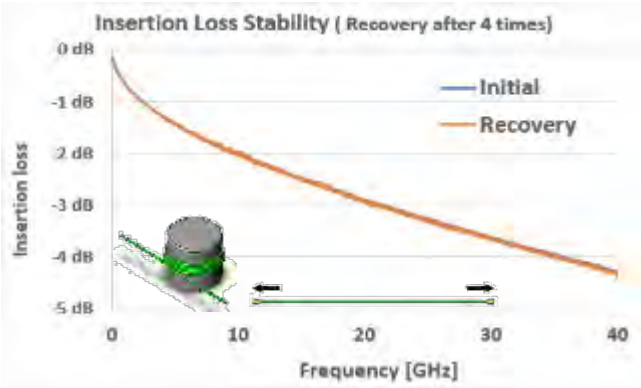
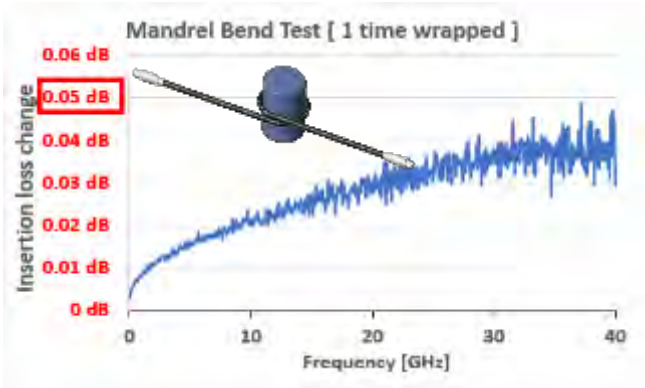
SMA(m) – 13A26 – SMA(m) – 1.0 m



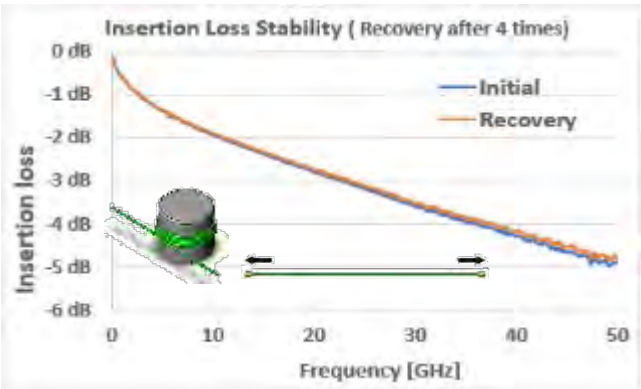
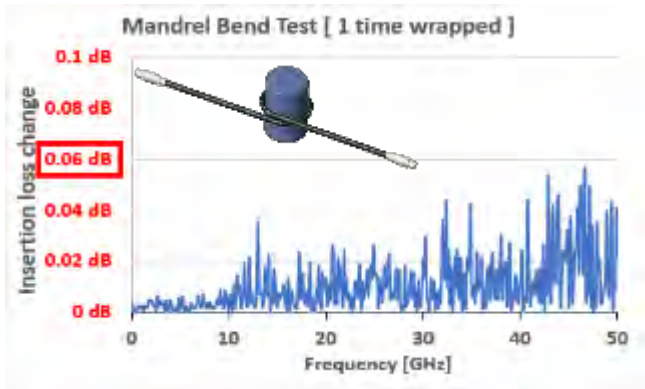
HFSMA(m) –11A33 – HFSMA(m) – 1.0 m



2.92mm(m) – 9A40 – 2.92mm(m) – 1.0 m



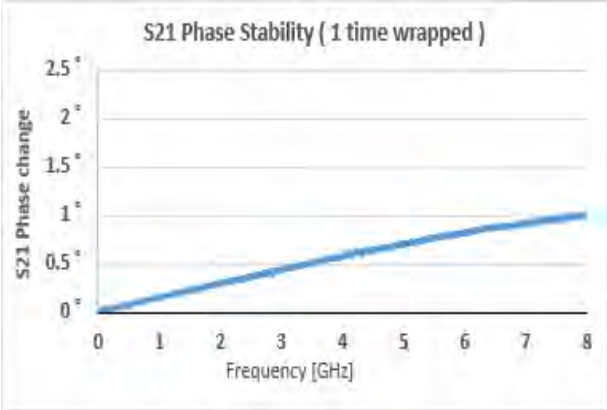
2.4mm(m) – 7A50D – 2.4mm(m) – 1.0 m



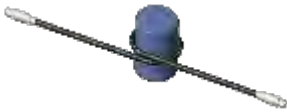
Phase stability vs. Bending

SMA(m) – 11A8G – SMA(m) – 1.0 m

SMA(m) – 13A26 – SMA(m) – 1.0 m



@8GHz , $\angle S_{21}$ change < 1.1°



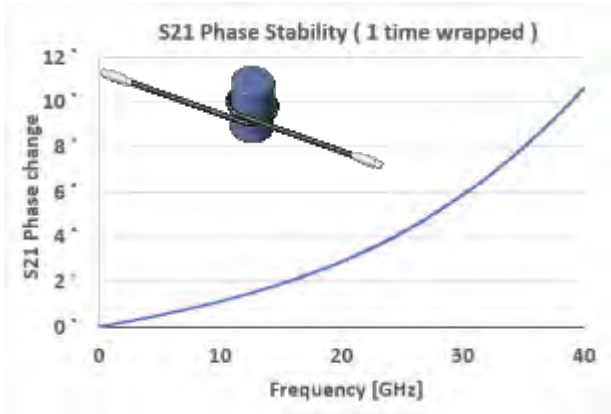
@18GHz , $\angle S_{21}$ change < 4°

HFSMA(m) – 11A33 – HFSMA(m) – 1.0 m

2.92mm(m) – 9A40 – 2.92mm(m) – 1.0 m

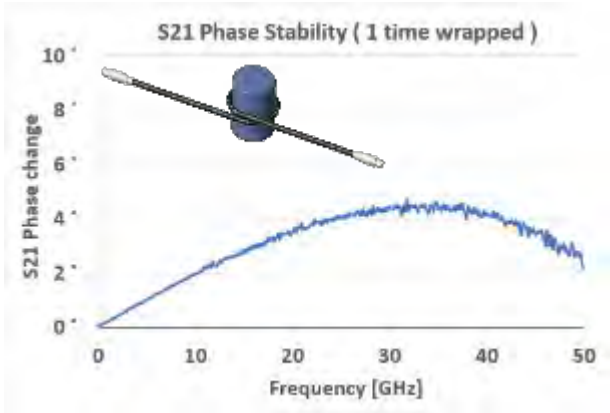


@33GHz , $\angle S_{21}$ change < 4°



@40GHz , $\angle S_{21}$ change < 12°

2.4mm(m) – 7A50D – 2.4mm(m) – 1.0 m

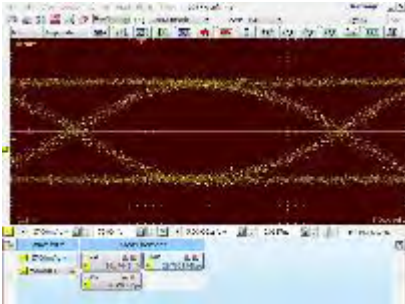


@50GHz , $\angle S_{21}$ change < 6°

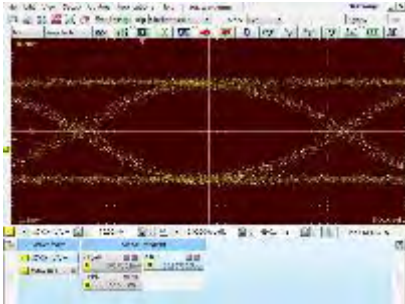
Eye pattern and Skew

SMA(m) – 11A8G – SMA(m) – 1.0 m

Eye pattern



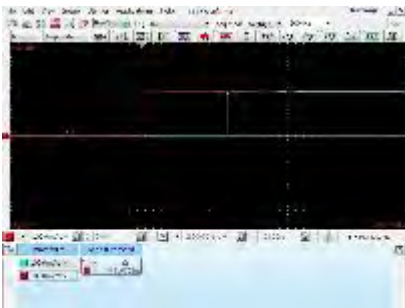
< Cable 1 >



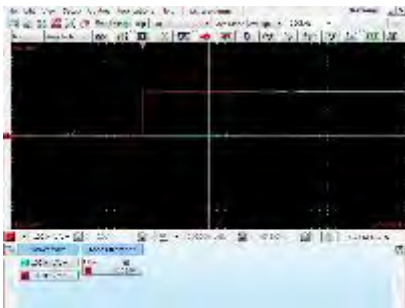
< Cable 2 >

Item	Cable 1	Cable 2
EyeH [mV]	361.76	362.01
Jitter [ps]	6.8	6.15
BitR [Gbps]	29.78	29.89

Skew (delay time)



< Cable 1 >

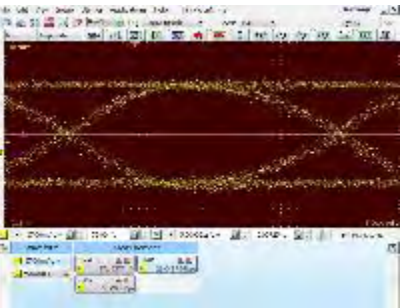


< Cable 2 >

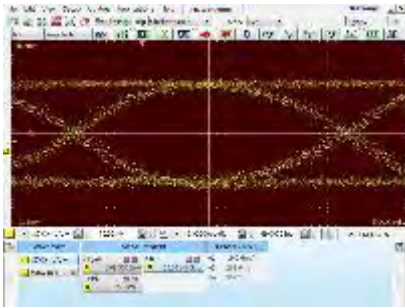
Item	Delay time [ps]
Cable 1	4316.762
Cable 2	4315.286
△	1.476

HFSMA(m) – 13A26 – HFSMA(m) – 1.0 m

Eye pattern



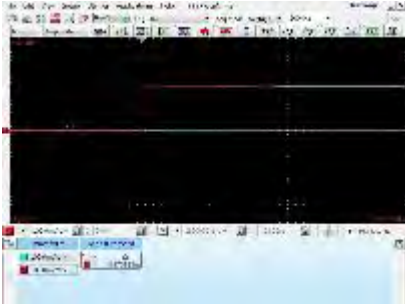
< Cable 1 >



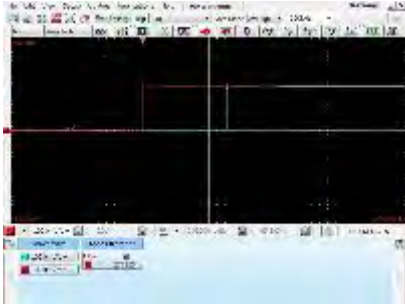
< Cable 2 >

Item	Cable 1	Cable 2
EyeH [mV]	371.95	368.50
Jitter [ps]	5.6	5.75
BitR [Gbps]	29.04	29.02

Skew (delay time)



< Cable 1 >



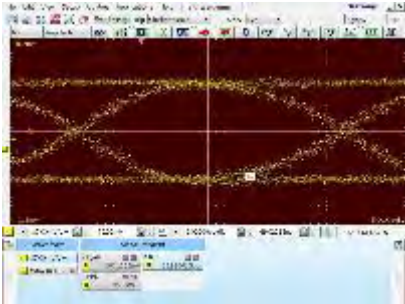
< Cable 2 >

Item	Delay time [ps]
Cable 1	4275.385
Cable 2	4276.825
△	1.44

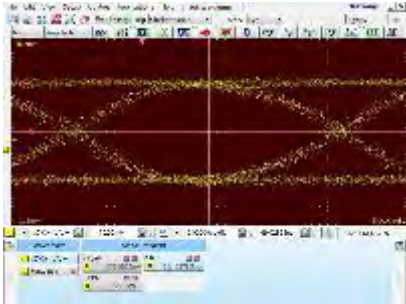
Eye pattern and Skew

HFSMA(m) – 11A33 – HFSMA(m) – 1.0 m

Eye pattern



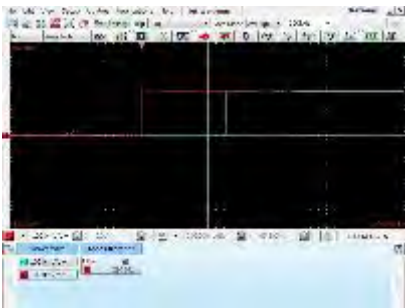
< Cable 1>



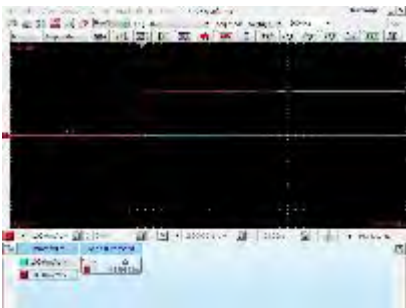
< Cable 2>

Item	Cable 1	Cable 2
EyeH [mV]	362.12	359.89
Jitter [ps]	5.95	5.55
BitR [Gbps]	29.38	29.42

Skew (delay time)



< Cable 1>

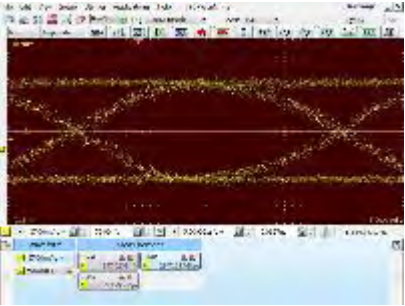


< Cable 2>

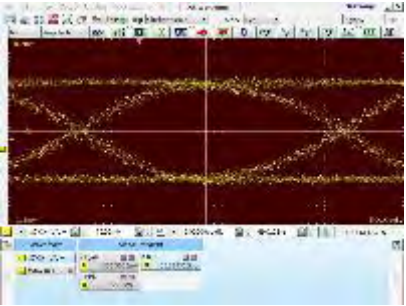
Item	Delay time [ps]
Cable 1	4290.941
Cable 2	4289.892
△	1.049

2.92mm(m) – 9A40 – 2.92mm(m) – 1.0 m

Eye pattern



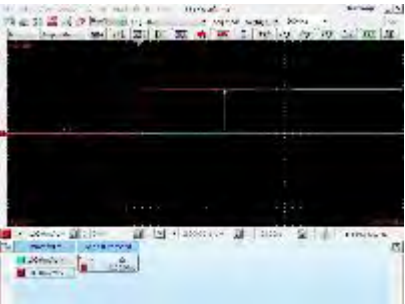
< Cable 1>



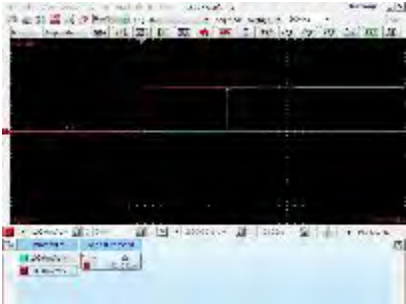
< Cable 2>

Item	Cable 1	Cable 2
EyeH [mV]	357.62	357.50
Jitter [ps]	5.35	5.55
BitR [Gbps]	29.71	29.69

Skew (delay time)



< Cable 1>



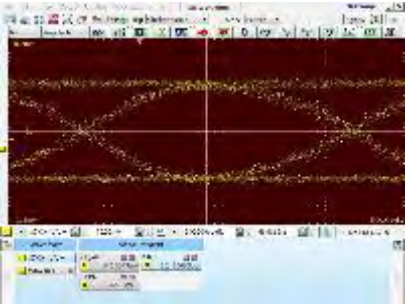
< Cable 2>

Item	Delay time [ps]
Cable 1	4315.696
Cable 2	4314.531
△	1.165

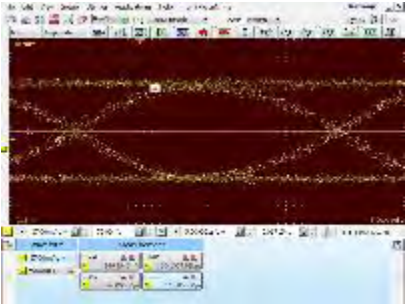
Eye pattern and Skew

2.4mm(m) – 7A50D – 2.4mm(m) – 1.0 m

Eye pattern



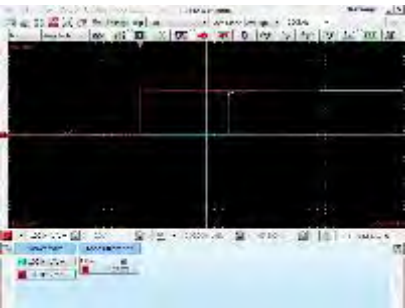
< Cable 1>



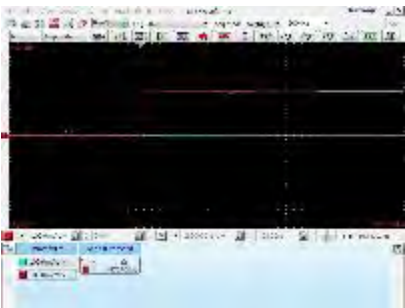
< Cable 2>

Item	Cable 1	Cable 2
EyeH [mV]	345.30	346.39
Jitter [ps]	5.65	6.0
BitR [Gbps]	29.46	30.10

Skew (delay time)



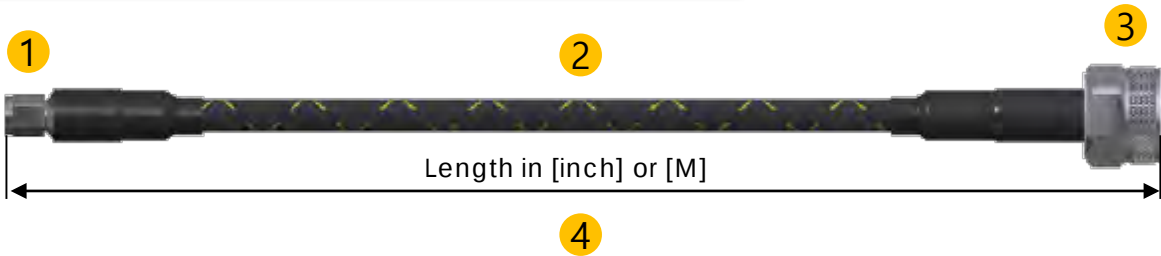
< Cable 1>



< Cable 2>

Item	Delay time [ps]
Cable 1	4477.375
Cable 2	4475.708
Δ	1.667

Example of SMA to N cable assembly



Part No. SMA(m) – 13A26 – N(m) – 1M

- 1 Connector Type
(m) : male
(f) : female

2 Cable Series
➤ Refer to page6 (part naming for cable)
- 3 Connector Type
(m) : male
(f) : female

4 Assembly Length in [M]

Cable and Available Connector Series

Frequency	Available Cable	Raw Cable Insertion Loss		Available connector Series					
		[dB/m]	[dB/ft.]	N	SMA	3.5mm	HFSMA	2.92mm	2.4mm
DC ~ 8 GHz	11S8GD, 11S8G, 11U8G, 11F8G, 11A8GD, 11A8G	- 0.91 max. @ 8GHz	- 0.278 max. @ 8GHz	○	○				
DC ~18 GHz	13A18, 13F18, 13S18	- 1.25 max. @ 18GHz	- 0.381 max. @ 18GHz	○	○	○	○		○
DC ~ 26.5 GHz	13A26, 13F26, 13S26	-1.55 max. @ 26.5GHz	- 0.473 max. @ 26.5GHz		○	○	○		○
DC ~ 33 GHz	11S33D, 11S33, 11A33D, 11A33	- 2.00 max. @ 33GHz	- 0.610 max. @ 33GHz				○		
DC ~ 40 GHz	9A40, 9S40	- 2.60 max. @ 40GHz	- 0.793 max. @ 40GHz					○	○
DC ~ 50 GHz	7A50D	- 3.90 max. @ 50GHz	- 1.189 max. @ 50GHz						○

[25°C, at Sea Level]

Coaxial connector and specification for cable

Connector Type	Frequency	Electrical Performance	
		VSWR	Insertion Loss [dB]
N	DC ~ 18 GHz	Max. 1.22 : 1	- 0.10 @ 18GHz
SMA	DC ~ 18 GHz	Max. 1.25 : 1	- 0.10 @ 18GHz
3.5 mm	DC ~ 26.5 GHz	Max. 1.25 : 1	- 0.10 @ 26.5GHz
HFSMA®	DC ~ 33 GHz	Max. 1.25 : 1	- 0.15 @ 33GHz
2.92 mm	DC ~ 40 GHz	Max. 1.25 : 1	- 0.25 @ 40GHz
2.4 mm	DC ~ 50 GHz	Max. 1.30 : 1	- 0.30 @ 50GHz

[25°C, at Sea Level]

Standard Connector



N(m) Straight
[DC ~18GHz]



SMA(m) Straight
[DC ~18GHz]



3.5mm(m) Straight
[DC ~26.5GHz]



HFSMA(m) Straight
[DC ~33GHz]



2.92mm(m) Straight
[DC ~40GHz]



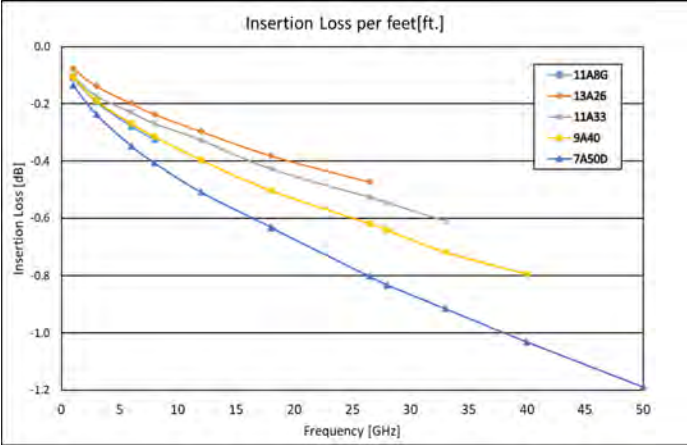
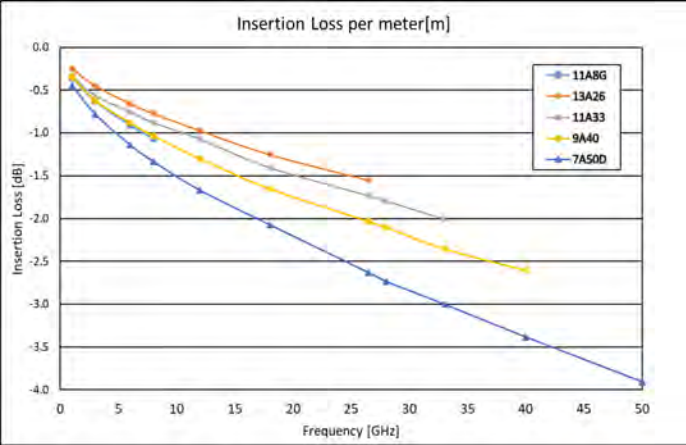
2.4mm(m) Straight
[DC ~50GHz]

Customized Connector



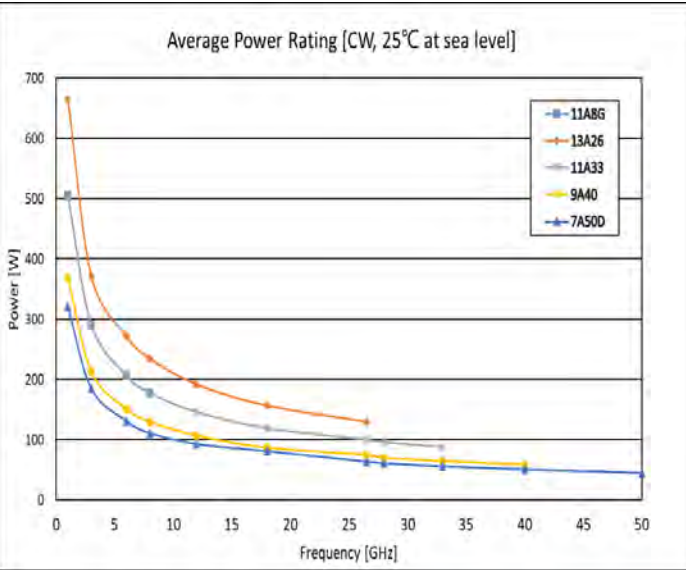
Metal sleeve & boot
with performance data

Insertion loss



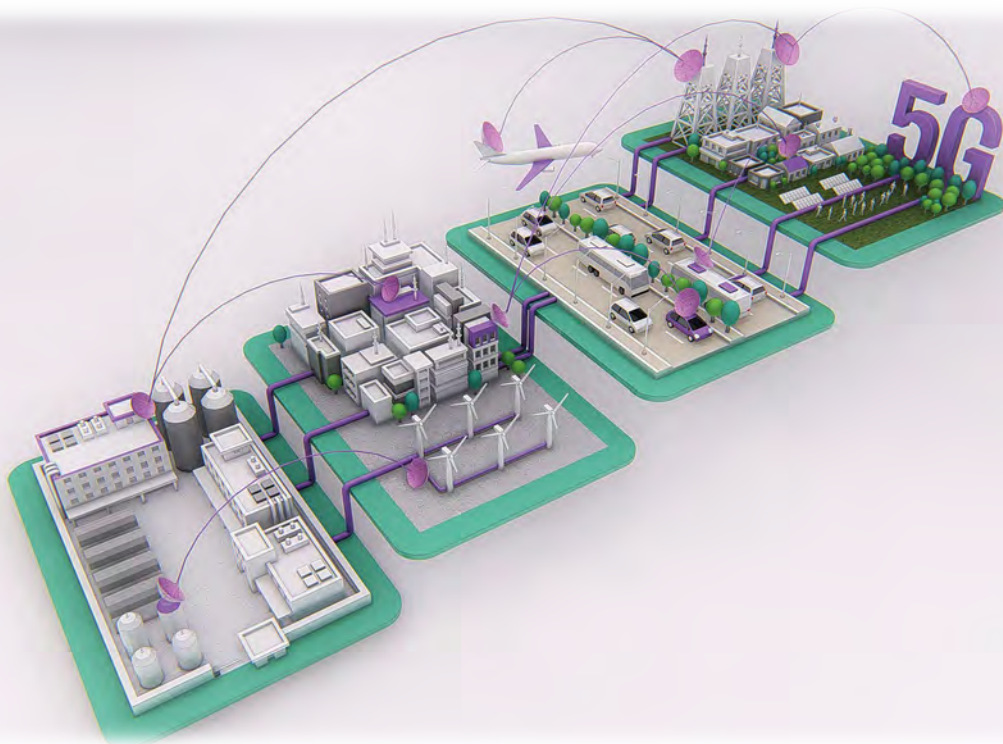
		Raw cable Insertion Loss [25°C, at sea level]										
Cable	GHz	1	3	6	8	12	18	26.5	28	33	40	50
	[dB/m]	-0.355	-0.629	-0.911	-1.066							
1 1 A 8 G	[dB/ft.]	-0.108	-0.192	-0.278	-0.325							
	[dB/m]	-0.250	-0.449	-0.657	-0.773	-0.973	-1.253	-1.552				
1 3 A 2 6	[dB/ft.]	-0.076	-0.137	-0.198	-0.236	-0.296	-0.381	-0.473				
	[dB/m]	-0.334	-0.562	-0.753	-0.879	-1.072	-1.404	-1.732	-1.793	-2.005		
1 1 A 3 3	[dB/ft.]	-0.101	-0.171	-0.229	-0.268	-0.326	-0.427	-0.527	-0.546	-0.610		
	[dB/m]	-0.344	-0.624	-0.881	-1.035	-1.300	-1.652	-2.032	-2.104	-2.351	-2.603	
9 A 4 0	[dB/ft.]	-0.104	-0.189	-0.268	-0.315	-0.396	-0.503	-0.619	-0.640	-0.716	-0.793	
	[dB/m]	-0.442	-0.783	-1.141	-1.336	-1.671	-2.073	-2.632	-2.734	-3.001	-3.382	-3.904
7 A 5 0 D	[dB/ft.]	-0.134	-0.237	-0.347	-0.407	-0.509	-0.631	-0.802	-0.832	-0.915	-1.031	-1.189

Average Power Rating



		Average Power Rating [C W , 25°C, at sea level]				
GHz		11 A 8 G	13 A 2 6	11 A 3 3	9 A 4 0	7 A 5 0 D
1		505	665	505	369	320
3		292	371	292	213	185
6		206	272	206	151	131
8		178	235	178	130	111
12			192	146	107	93
18			157	119	87	81
26.5			130	100	75	64
28				96	70	61
33				88	65	56
40					59	51
50						45

* Temperature 25°C / 1atm (sea level)



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