



RF MORECOM

ISO9001/14001 Certified IPC-A-620

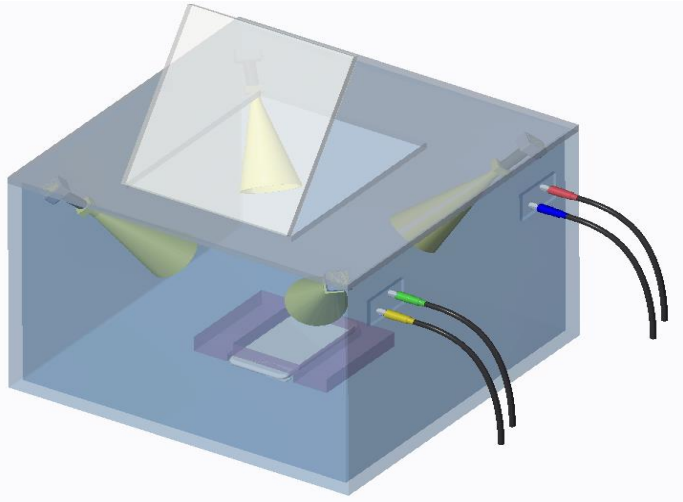
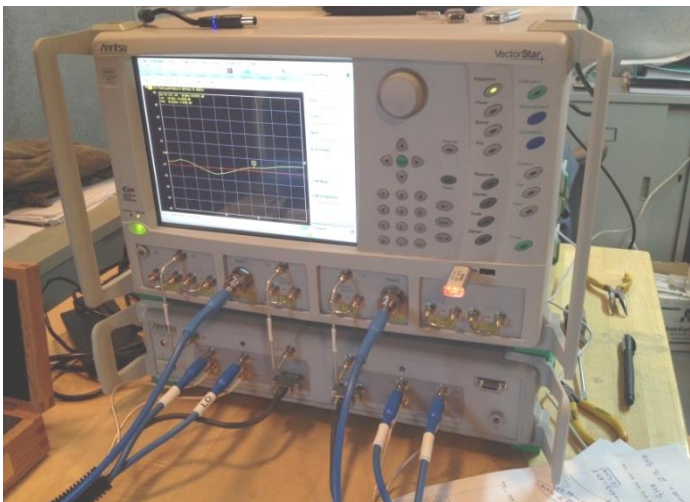
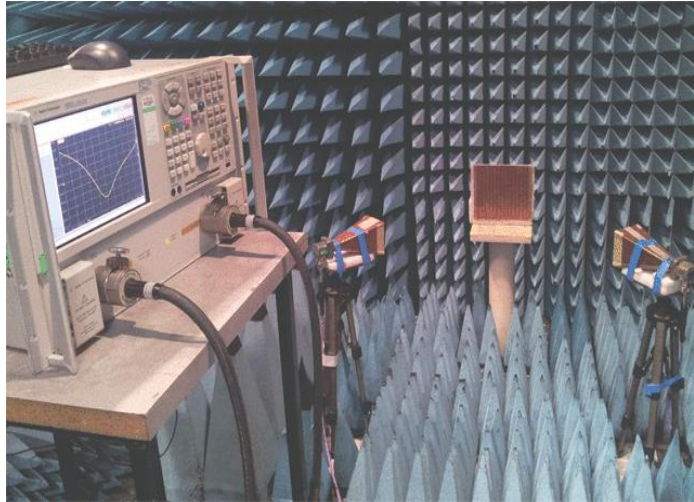


RF MORECOM

Microwave Cable Assembly

# Various Advanced Technology for many Industries

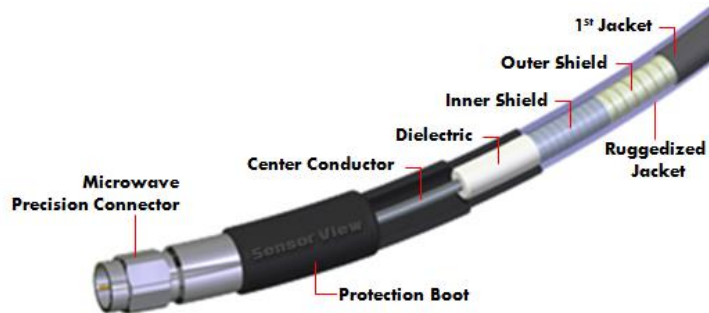
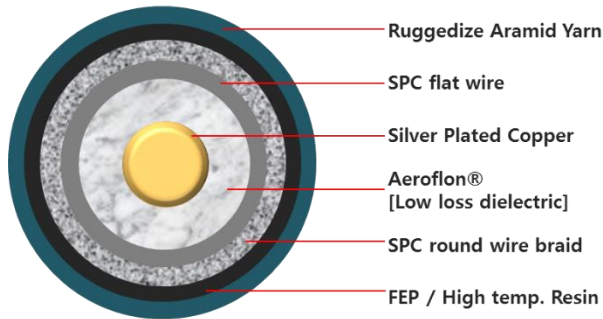
		Applicable Products		Core Technology						Applications	
		Cable	Antenna	Low dielectric constant Aeroflon®	Lower ohmic loss Nanoflon®	Low conductor loss Coolductor®	Plating on PTFE Conflon®	Plating on Fiber Zenild®	Precision Assembly		Composite Design
1	Low Loss	●	●	○	○	○	○		○		RF connectivity
2	Low Noise	●					○	○			High sensitivity measurement
3	Light weight	●	●	○	○	○	○	○			Aircraft, Automotive
4	Low Profile	●		○	○	○	○			○	Mobile Phone , AP
5	Low Cost	●	●	○	○		○				Test & Measurement cable
6	Low PIM	●					○		○		Antenna, Filter test cable
7	Flexibility	●	●	○	○			○			Test cable & RRH
8	High Power	●	●	○		○					High power component, TVAC
9	Shielding(EMI)	●					○	○	○		Chamber, defense system
10	Phase stable vs temp	●	●	○	○						Phased array antenna, Radar
11	Phase matched	●		○			○		○		Phased array ant, High speed digital
12	Composite	●						○	○	○	5G infrastructure



# Cable Design and Core Material

**RFMORECOM** 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, especially, for mm-wave, 5G.

## 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

**RFMORECOM** uses porous PTFE dielectric for the low loss Microwave coaxial cable assemblies to obtain a dielectric constant as close as possible to air-dielectric.

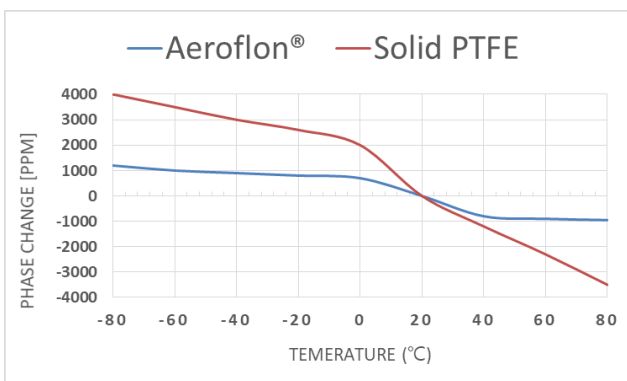
Low loss, low density dielectrics range in dielectric constant from 1.6~1.7 and have a loss tangent of 0.0001.

So **RFMORECOM's** low loss coaxial cable has much lower loss at Microwave frequency than general solid PTFE.



Thermally, **RFMORECOM Aeroflon®** has a smaller “knee” in its CTE profile around room temp. Unlike solid PTFE dielectrics, it remains stable when exposed to extreme temperatures, allowing it to be used for higher power applications.

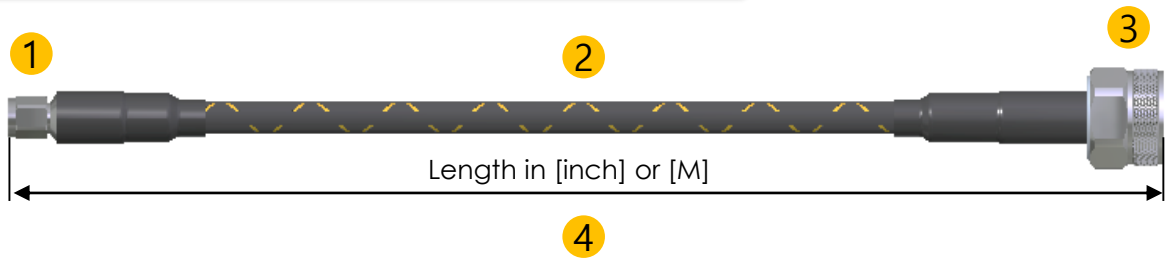
### PTFE Knee Graph



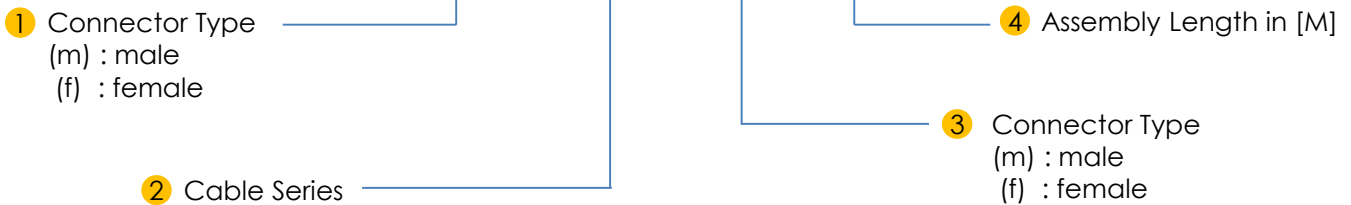
- ▶ Low insertion loss
- ▶ Phase stable vs Temperature
- ▶ Insertion loss stable vs bend
- ▶ Phase stable vs bend
- ▶ Low VSWR up to 40GHz

# Part Number for Ordering

## Example of SMA to N Cable Assembly



**Part No. SMA(m) – ISA1 – N(m) – 1M**



## 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 ~ 6 GHz	ISS3, ISS3s, ISA3, ISA3s	- 0.91 max. @ 6GHz	- 0.278 max. @ 6GHz	●	●				
DC ~ 18 GHz	ISF1, ISS, ISA1	- 1.25 max. @ 18GHz	- 0.381 max. @ 18GHz	●	●	●	●		●
DC ~ 26.5 GHz		- 1.55 max. @ 26.5GHz	- 0.473 max. @ 26.5GHz		●	●	●		●
DC ~ 33 GHz	ISS2, ISS2s, ISA2, ISA2s	- 2.00 max. @ 33GHz	- 0.610 max. @ 33GHz				●		
DC ~ 40 GHz	ISS4, ISA4	- 2.60 max. @ 40GHz	- 0.793 max. @ 40GHz					●	●
DC ~ 50 GHz	ISA5	- 3.90 max. @ 50GHz	- 1.189 max. @ 50GHz						●

[ 25°C, at Sea Level]

# Part Number for Ordering

## Coaxial Connector and Specification for Cable

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

[ 25°C, at Sea Level]

## Standard Connector



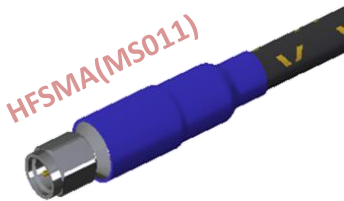
N(m) Straight  
[DC ~18GHz]



SMA(m) Straight  
[DC ~26.5GHz]



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



HFSMA(m) Straight  
[DC ~33GHz]



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



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

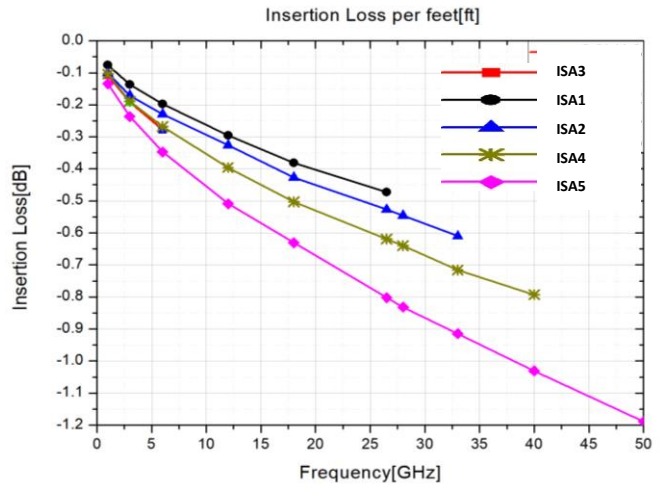
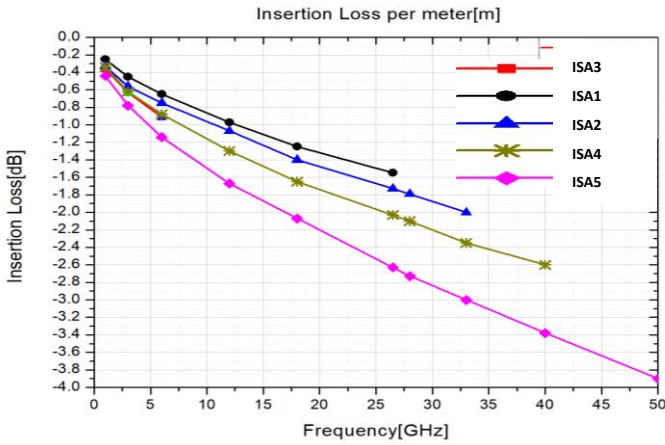
## Customized Connector



Metal sleeve & boot  
with performance data

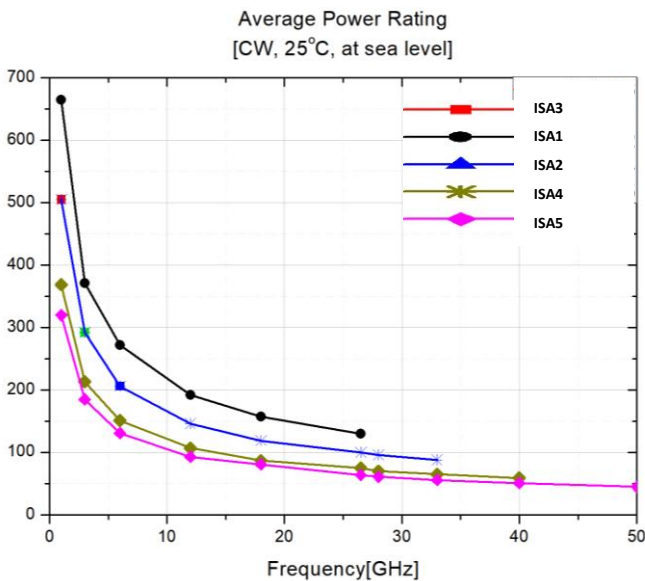
# Electrical Test Data for Product Ordered

## Insertion Loss



		Raw cable Insertion Loss [ 25°C, at sea level ]									
Cable	GHz	1	3	6	12	18	26.5	28	33	40	50
ISA 3	[dB / m]	-0.355	-0.629	-0.911							
	[dB / ft]	-0.108	-0.192	-0.278							
ISA 1	[dB / m]	-0.250	-0.449	-0.657	-0.973	-1.253	-1.552				
	[dB / ft]	-0.076	-0.137	-0.198	-0.296	-0.381	-0.473				
ISA 2	[dB / m]	-0.334	-0.562	-0.753	-1.072	-1.404	-1.732	-1.793	-2.005		
	[dB / ft]	-0.101	-0.171	-0.229	-0.326	-0.427	-0.527	-0.546	-0.610		
ISA 4	[dB / m]	-0.344	-0.624	-0.881	-1.300	-1.652	-2.032	-2.104	-2.351	-2.603	
	[dB / ft]	-0.104	-0.189	-0.268	-0.396	-0.503	-0.619	-0.640	-0.716	-0.793	
ISA 5	[dB / m]	-0.442	-0.783	-1.141	-1.671	-2.073	-2.632	-2.734	-3.001	-3.382	-3.904
	[dB / ft]	-0.134	-0.237	-0.347	-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	ISA 3	ISA 1	ISA 2	ISA 4	ISA 5	
1	505	665	505	369	320	
3	292	371	292	213	185	
6	206	272	206	151	131	
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)

# Phase Matched Cable Assembly

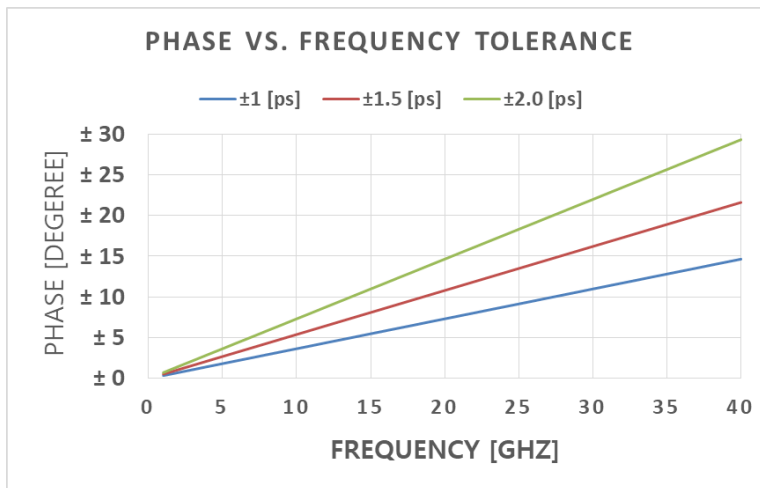
## Relative matching

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. **RFMORECOM**'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

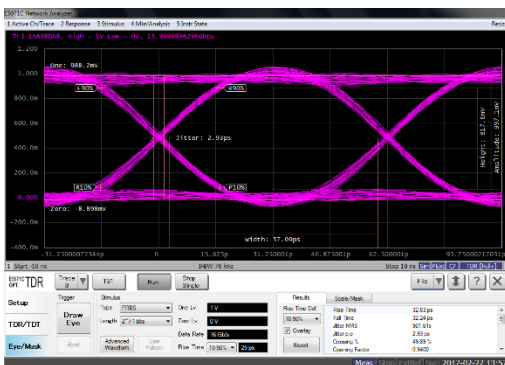
Consists of matching assemblies to an absolute electrical length (Group delay). **RFMORECOM**'s precision cutting tools that can achieve very close tolerance in phase matched sets with precision coaxial connectors.

## Phase vs. time vs. Frequency

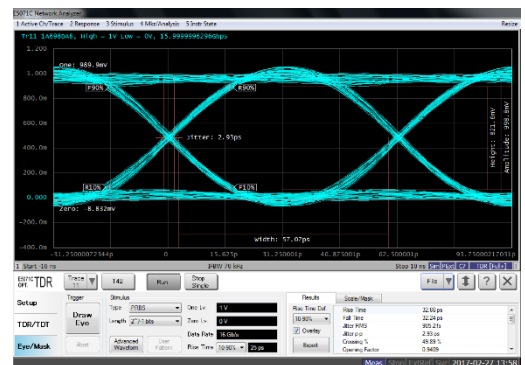


## Test Data

### Eye Pattern



Cable 1 : SMA(m) – ISA1 – SMA(m) – 39.4 inch



Cable 2 : SMA(m) – ISA1 – SMA(m) – 39.4 inch

### Tr / Tf (skew)

	Cable 1	Cable 2	$\Delta$ [ps]
Rise Time[ps]	32.63	32.66	0.03
Fall Time[ps]	32.24	32.24	0



# Aeroflon® DC ~ 6GHz series

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






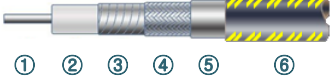


Raw Cable Part No.	ISS3d	ISS3	ISA3d	ISA3					
<b>Mechanical</b>									
Cable Type	Low Loss / Flex	Low Loss / Super Flex	Low Loss / Flex Aramid Jacket	Low Loss / Super Flex Aramid Jacket					
Center Conductor Type	Solid	Stranded	Solid	Stranded					
Center Conductor Dia. [mm]	1.12	19 / 0.225	1.12	19 / 0.225					
Outer Diameter [mm]	5.20±0.1	5.20±0.1	5.80±0.1	5.80±0.1					
Minimum Bend Radius [mm]	20	20	20	20					
Weight [g/m]	55.5	55.5	62	62					
Temperature Range	-50°C~135°C	-50°C~135°C	-50°C~135°C	-50°C~135°C					
<b>Electrical</b>									
Operating Frequency	DC ~ 6GHz	DC ~ 6GHz	DC ~ 6GHz	DC ~ 6GHz					
Velocity of Propagation	77% nom.	77% nom.	77% nom.	77% nom.					
RF Leakage	- 90dB	- 90dB	- 90dB	- 90dB					
Insertion Loss [dB]	Symbol	[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	- 0.34	- 0.104	- 0.36	- 0.108
	2 GHz	- 0.49	- 0.149	- 0.51	- 0.155	- 0.49	- 0.149	- 0.51	- 0.155
	3 GHz	- 0.61	- 0.185	- 0.63	- 0.192	- 0.61	- 0.185	- 0.63	- 0.192
	4 GHz	- 0.71	- 0.216	- 0.73	- 0.224	- 0.71	- 0.216	- 0.73	- 0.224
	5 GHz	- 0.80	- 0.243	- 0.83	- 0.252	- 0.80	- 0.243	- 0.83	- 0.252
	6 GHz	- 0.88	- 0.268	- 0.91	- 0.278	- 0.88	- 0.268	- 0.91	- 0.278
<b>Average Power Rating [W] @ 25°C, at Sea Level</b>									
1 GHz	561	505	561	505					
2 GHz	397	357	397	357					
3 GHz	324	292	324	292					
4 GHz	281	253	281	253					
5 GHz	251	226	251	226					
6 GHz	229	206	229	206					



# Aeroflon® DC ~ 6GHz series

## Construction

Cable Part No.	ISS3d		ISS3		ISA3d		ISA3	
	 Solid Type		 Stranded Type		 Solid Type		 Stranded Type	
Construction								
	① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket		① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket		① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket ⑥ Ruggedized Aramid Jacket		① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket ⑥ Ruggedized Aramid Jacket	
Part	Material	Diameter	Material	Diameter	Material	Diameter	Material	Diameter
Center Conductor	Silver Plated Copper [Solid]	Φ 1.12 [mm] Φ 0.044 [inch]	Silver Plated Copper [Stranded]	Φ 19 / 0.225 [mm] Φ 19 / 0.0088 [inch]	Silver Plated Copper [Solid]	Φ 1.12 [mm] Φ 0.044 [inch]	Silver Plated Copper [Stranded]	Φ 19 / 0.225 [mm] Φ 19 / 0.0088 [inch]
Dielectric	Aeroflon® [Extruded]		Aeroflon® [Extruded]		Aeroflon® [Extruded]		Aeroflon® [Extruded]	
1 <sup>st</sup> / 2 <sup>nd</sup> Shield	Mylar tape & Copper wire		Mylar tape & Copper wire		Mylar tape & Copper wire		Mylar tape & Copper wire	
Jacket	High Temperature Resin	Φ 5.20 ± 0.1 [mm] Φ 0.204 ± 0.003 [inch]	High Temperature Resin	Φ 5.20 ± 0.1 [mm] Φ 0.204 ± 0.003 [inch]	Ruggedized Aramid Yarn	Φ 5.80 ± 0.1 [mm] Φ 0.228 ± 0.003 [inch]	Ruggedized Aramid Yarn	Φ 5.80 ± 0.1 [mm] Φ 0.228 ± 0.003 [inch]

## Electrical & Mechanical Specification

Cable Part No.	ISS3d			ISS3			ISA3d			ISA3			
Characteristic Impedance	50 ± 1 Ω			50 ± 1 Ω			50 ± 1 Ω			50 ± 1 Ω			
Operating Frequency	DC to 6 GHz			DC to 6 GHz			DC to 6 GHz			DC to 6 GHz			
Temperature	-50 °C ~ +135 °C			-50 °C ~ +135 °C			-50 °C ~ +135 °C			-50 °C ~ +135 °C			
Velocity of Propagation	77% nominal			77% nominal			77% nominal			77% nominal			
Minimum Bend Radius	20 mm / 0.78 inch			20 mm / 0.78 inch			20 mm / 0.78 inch			20 mm / 0.78 inch			
Weight [g/m]	55.5			55.5			62.0			55.5			
Shielding Effectiveness	< -90 dB			< -90 dB			< -90 dB			< -90 dB			
Phase Stability vs. Flexure	1° max. @6GHz			1° max. @6GHz			1° max. @6GHz			1° max. @6GHz			
Loss Stability vs. Flexure	Δ 0.05dB to 6GHz			Δ 0.05dB to 6GHz			Δ 0.05dB to 6GHz			Δ 0.05dB to 6GHz			
Available Connector	SMA / N			SMA / N			SMA / N			SMA / N			
Frequency	[dB/m]	[dB/FT]	[Watt]	[dB/m]	[dB/FT]	[Watt]	[dB/m]	[dB/FT]	[Watt]	[dB/m]	[dB/FT]	[Watt]	
Raw Cable Insertion Loss [ 25°C, at Sea Level ] & Average Power Rating[W] [ CW 25°C, at Sea Level ]	1GHz	-0.30	-0.091	561	-0.32	-0.098	505	-0.30	-0.091	561	-0.32	-0.098	505
	2GHz	-0.40	-0.122	397	-0.42	-0.128	357	-0.40	-0.122	397	-0.42	-0.128	357
	3GHz	-0.49	-0.149	324	-0.52	-0.159	292	-0.49	-0.149	324	-0.52	-0.159	292
	4GHz	-0.58	-0.177	281	-0.60	-0.183	253	-0.58	-0.177	281	-0.60	-0.183	253
	5GHz	-0.65	-0.198	251	-0.68	-0.207	226	-0.65	-0.198	251	-0.68	-0.207	226
	6GHz	-0.72	-0.220	229	-0.75	-0.229	206	-0.72	-0.220	229	-0.75	-0.229	206

# Aeroflon® DC ~ 26.5GHz series

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



Raw Cable Part No.	ISF1		ISS1		ISA1			
<b>Mechanical</b>								
Cable Type	Low Loss		Low Loss / Super Flex		Low Loss / Super Flex Aramid Jacket			
Center Conductor Type	Stranded		Stranded		Stranded			
Center Conductor Dia. [mm]	19 / 0.287		19 / 0.287		19 / 0.287			
Outer Diameter [mm]	5.60±0.1		6.20±0.1		6.700±0.1			
Minimum Bend Radius [mm]	30		30		30			
Weight [g/m]	58		75		83			
Temperature Range	-50°C~135°C		-50°C~135°C		-50°C~135°C			
<b>Electrical</b>								
Operating Frequency	DC ~ 26.5GHz		DC ~ 26.5GHz		DC ~ 26.5GHz			
Velocity of Propagation	77% nom.		77% nom.		77% nom.			
RF Leakage	- 90dB		- 90dB		- 90dB			
Insertion Loss [dB]	Symbol	[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	
<b>Average Power Rating [W] @ 25°C, at Sea Level</b>								
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			

# Aeroflon® DC ~ 26.5GHz series

## Construction

Cable Part No.	ISF1		ISS1		ISA1			
	Stranded Type		Stranded Type		Stranded Type			
Construction								
	① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket		① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket		① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket ⑥ Ruggedized Aramid Jacket		① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket ⑥ Ruggedized Aramid Jacket	
Part	Material	Diameter	Material	Diameter	Material	Diameter		
Center Conductor	Silver Plated Copper [Stranded]	Φ 19/0.287 [mm] Φ 19/0.0113 [inch]	Silver Plated Copper [Stranded]	Φ 19 / 0.287 [mm] Φ 19 / 0.0113 [inch]	Silver Plated Copper [Solid]	Φ 19 / 0.287 [mm] Φ 19 / 0.0113 [inch]		
Dielectric	Aeroflon® [Extruded]		Aeroflon® [Extruded]		Aeroflon® [Extruded]			
1 <sup>st</sup> / 2 <sup>nd</sup> Shield	Silver Plated Copper		Silver Plated Copper		Silver Plated Copper			
Jacket	FEP	Φ 5.60 ± 0.1 [mm] Φ 0.220 ± 0.003 [inch]	High Temperature Resin	Φ 6.20 ± 0.1 [mm] Φ 0.244 ± 0.003 [inch]	Ruggedized Aramid Yarn	Φ 6.70 ± 0.1 [mm] Φ 0.263 ± 0.003 [inch]		

## Electrical & Mechanical Specification

Cable Part No.	ISF1			ISS1			ISA1					
Characteristic Impedance	50 ± 1 Ω			50 ± 1 Ω			50 ± 1 Ω					
Operating Frequency	DC to 26.5 GHz			DC to 26.5 GHz			DC to 26.5 GHz					
Temperature	-50 °C ~ +125 °C			-50 °C ~ +135 °C			-50 °C ~ +135 °C					
Velocity of Propagation	77% nominal			77% nominal			77% nominal					
Minimum Bend Radius	30 mm / 1.18 inch			30 mm / 1.18 inch			30 mm / 1.18 inch					
Weight [g/m]	58.0			75.0			83.0					
Shielding Effectiveness	< -90 dB			< -90 dB			< -90 dB					
Phase Stability vs. Flexure	6° max. @26.5GHz			6° max. @26.5GHz			6° max. @26.5GHz					
Loss Stability vs. Flexure	Δ 0.1dB to 26.5GHz			Δ 0.1dB to 26.5GHz			Δ 0.1dB to 26.5GHz					
Available Connector	3.5mm/ HF SMA/ SMA/ N(18GHz)			3.5mm/ HF SMA/ SMA/ N(18GHz)			3.5mm/ HF SMA/ SMA/ N(18GHz)					
Frequency	[dB/m]	[dB/FT]	[Watt]	[dB/m]	[dB/FT]	[Watt]	[dB/m]	[dB/FT]	[Watt]			
Raw Cable Insertion Loss [ 25°C, at Sea Level ] & Average Power Rating[W] [ CW 25°C, at Sea Level ]	1GHz	-0.25	-0.076	696	-0.25	-0.076	665	-0.25	-0.076	665		
	3GHz	-0.45	-0.137	398	-0.45	-0.137	371	-0.45	-0.137	371		
	6GHz	-0.65	-0.198	285	-0.65	-0.198	272	-0.65	-0.198	272		
	10GHz	-0.88	-0.268	220	-0.88	-0.268	211	-0.88	-0.268	211		
	12GHz	-0.97	-0.296	201	-0.97	-0.296	192	-0.97	-0.296	192		
	18GHz	-1.25	-0.381	164	-1.25	-0.381	157	-1.25	-0.381	157		
	26.5GHz	-1.55	-0.473	136	-1.55	-0.473	130	-1.55	-0.473	130		

# Aeroflon® DC ~ 33GHz series for 5G

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



Raw Cable Part No.	ISS2d	ISS2	ISA2d	ISA2					
<b>Mechanical</b>									
Cable Type	Low Loss / Flex	Low Loss / Super Flex	Low Loss / Flex Aramid Jacket	Low Loss / Super Flex Aramid Jacket					
Center Conductor Type	Solid	Stranded	Solid	Stranded					
Center Conductor Dia. [mm]	1.12	19 / 0.225	1.12	19 / 0.225					
Outer Diameter [mm]	5.20±0.1	5.20±0.1	5.8±0.1	5.8±0.1					
Minimum Bend Radius [mm]	25	25	25	25					
Weight [g/m]	56	55.5	62	62					
Temperature Range	-50°C~135°C	-50°C~135°C	-50°C~135°C	-50°C~135°C					
<b>Electrical</b>									
Operating Frequency	DC ~ 33GHz	DC ~ 33GHz	DC ~ 33GHz	DC ~ 33GHz					
Velocity of Propagation	77% nom.	77% nom.	77% nom.	77% nom.					
RF Leakage	- 90dB	- 90dB	- 90dB	- 90dB					
Insertion Loss [dB]	Symbol	[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
	26.5GHz	-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
<b>Average Power Rating [W] @ 25°C, at Sea Level</b>									
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					

# Aeroflon® DC ~ 33GHz series for 5G

## Construction

Cable Part No.	ISS2d		ISS2		ISA2d		ISA2	
	 Solid Type	 Stranded Type	 Solid Type	 Stranded Type	 Solid Type	Stranded Type	Solid Type	Stranded Type
Construction								
	① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket		① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket		① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket ⑥ Ruggedized Aramid Jacket		① Center Conductor ② Aeroflon® ③ 1 <sup>st</sup> Shield(Flat wire) ④ 2 <sup>nd</sup> Shield(Round wire) ⑤ Jacket ⑥ Ruggedized Aramid Jacket	
Part	Material	Diameter	Material	Diameter	Material	Diameter	Material	Diameter
Center Conductor	Silver Plated Copper [Solid]	Φ 1.12 [mm] Φ 0.044 [inch]	Silver Plated Copper [Stranded]	Φ 19 / 0.225 [mm] Φ 19 / 0.0088 [inch]	Silver Plated Copper [Solid]	Φ 1.12 [mm] Φ 0.0044 [inch]	Silver Plated Copper [Solid]	Φ 19 / 0.225 [mm] Φ 19 / 0.0088 [inch]
Dielectric	Aeroflon® [Extruded]		Aeroflon® [Extruded]		Aeroflon® [Extruded]		Aeroflon® [Extruded]	
1 <sup>st</sup> / 2 <sup>nd</sup> Shield	Silver Plated Copper		Silver Plated Copper		Silver Plated Copper		Silver Plated Copper	
Jacket	High Temperature Resin	Φ 5.20 ± 0.1 [mm] Φ 0.204 ± 0.003 [inch]	High Temperature Resin	Φ 5.20 ± 0.1 [mm] Φ 0.204 ± 0.003 [inch]	Ruggedized Aramid Yarn	Φ 5.80 ± 0.1 [mm] Φ 0.228 ± 0.003 [inch]	Ruggedized Aramid Yarn	Φ 5.80 ± 0.1 [mm] Φ 0.228 ± 0.003 [inch]

## Electrical & Mechanical Specification

Cable Part No.	ISS2d			ISS2			ISA2d			ISA2			
Characteristic Impedance	50 ± 1 Ω			50 ± 1 Ω			50 ± 1 Ω			50 ± 1 Ω			
Operating Frequency	DC to 33 GHz			DC to 33 GHz			DC to 33 GHz			DC to 33 GHz			
Temperature	-50 °C ~ +135 °C			-50 °C ~ +135 °C			-50 °C ~ +135 °C			-50 °C ~ +135 °C			
Velocity of Propagation	77% nominal			77% nominal			77% nominal			77% nominal			
Minimum Bend Radius	25 mm / 0.98 inch			25 mm / 0.98 inch			25 mm / 0.98 inch			25 mm / 0.98 inch			
Weight [g/m]	56.0			55.5			62.0			62.0			
Shielding Effectiveness	< -90 dB			< -90 dB			< -90 dB			< -90 dB			
Phase Stability vs. Flexure	10° max. @33GHz			10° max. @33GHz			10° max. @33GHz			10° max. @33GHz			
Loss Stability vs. Flexure	Δ 0.1dB to 33GHz			Δ 0.1dB to 33GHz			Δ 0.1dB to 33GHz			Δ 0.1dB to 33GHz			
Frequency	[dB/m]	[dB/FT]	[Watt]	[dB/m]	[dB/FT]	[Watt]	[dB/m]	[dB/FT]	[Watt]	[dB/m]	[dB/FT]	[Watt]	
Raw Cable Insertion Loss [ 25°C, at Sea Level ] & Average Power Rating[W] [ CW 25°C, at Sea Level ]	1GHz	-0.31	-0.095	561	-0.33	-0.101	505	-0.31	-0.095	561	-0.33	-0.101	505
	3GHz	-0.55	-0.168	324	-0.56	-0.171	292	-0.55	-0.168	324	-0.56	-0.171	292
	6GHz	-0.67	-0.204	229	-0.75	-0.229	206	-0.67	-0.204	229	-0.75	-0.229	206
	12GHz	-1.05	-0.320	162	-1.07	-0.326	146	-1.05	-0.320	162	-1.07	-0.326	146
	18GHz	-1.30	-0.396	133	-1.40	-0.427	119	-1.30	-0.396	133	-1.40	-0.427	119
	28GHz	-1.70	-0.518	106	-1.79	-0.546	96	-1.70	-0.518	106	-1.79	-0.546	96
	33GHz	-1.85	-0.564	98	-2.00	-0.610	88	-1.85	-0.564	98	-2.00	-0.610	88

# Aeroflon® DC ~ 40GHz series

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



Raw Cable Part No.	ISS4	ISS4					
<b>Mechanical</b>							
Cable Type	Low Loss / Super Flex	Low Loss / Super Flex Aramid Jacket					
Center Conductor Type	Stranded	Stranded					
Center Conductor Dia. [mm]	19 / 0.18	19 / 0.18					
Outer Diameter [mm]	5.10±0.1	5.40±0.1					
Minimum Bend Radius [mm]	25	25					
Weight [g/m]	55	60					
Temperature Range	-50°C~135°C	-50°C~135°C					
<b>Electrical</b>							
Operating Frequency	DC ~ 40GHz	DC ~ 40GHz					
Velocity of Propagation	77% nom.	77% nom.					
RF Leakage	- 90dB	- 90dB					
Insertion Loss [dB]	Symbol	[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		
	26.5GHz	-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		
<b>Average Power Rating [W] @ 25°C, at Sea Level</b>							
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					

# Aeroflon® DC ~ 40GHz series

## Construction

Cable Part No.	ISS4				ISA4					
	Stranded Type				Stranded Type					
Construction										
	<p>① Center Conductor                      ② Aeroflon®                      ③ 1<sup>st</sup> Shield(Flat wire)                      ④ 2<sup>nd</sup> Shield(Round wire)                      ⑤ Jacket</p>				<p>① Center Conductor                      ② Aeroflon®                      ③ 1<sup>st</sup> Shield(Flat wire)                      ④ 2<sup>nd</sup> Shield(Round wire)                      ⑤ Jacket                      ⑥ Ruggedized Aramid Jacket</p>					
Part	Material	Diameter			Material	Diameter				
Center Conductor	Silver Plated Copper [Stranded]	Φ 19 / 0.18 [mm] Φ 19 / 0.0070 [inch]			Silver Plated Copper [Stranded]	Φ 19 / 0.18 [mm] Φ 0.00470 [inch]				
Dielectric	Aeroflon® [Extruded]				Aeroflon® [Extruded]					
1 <sup>st</sup> / 2 <sup>nd</sup> Shield	Silver Plated Copper				Silver Plated Copper					
Jacket	High Temperature Resin	Φ 4.80 ± 0.1 [mm] Φ 0.188 ± 0.003 [inch]			Ruggedized Aramid Yarn	Φ 5.40 ± 0.1 [mm] Φ 0.212 ± 0.003 [inch]				

## Electrical & Mechanical Specification

Cable Part No.	ISS4				ISA4						
Characteristic Impedance	50 ± 1 Ω				50 ± 1 Ω						
Operating Frequency	DC to 40 GHz				DC to 490 GHz						
Temperature	-50 °C ~ +135 °C				-50 °C ~ +135 °C						
Velocity of Propagation	77% nominal				77% nominal						
Minimum Bend Radius	25 mm / 0.98 inch				25 mm / 0.98 inch						
Weight [g/m]	55.0				60.0						
Shielding Effectiveness	< -90 dB				< -90 dB						
Phase Stability vs. Flexure	12° max. @40GHz				12° max. @40GHz						
Loss Stability vs. Flexure	Δ 0.1dB to 40GHz				Δ 0.1dB to 40GHz						
Available Connector	2.92mm (K)				2.92mm (K)						
Frequency	[dB/m]	[dB/FT]	[Watt]			[dB/m]	[dB/FT]	[Watt]			
Raw Cable Insertion Loss [ 25°C, at Sea Level ] & Average Power Rating[W] [ CW 25°C, at Sea Level ]	1GHz	-0.34	-0.104	369			-0.34	-0.104	369		
	3GHz	-0.62	-0.189	213			-0.62	-0.189	213		
	6GHz	-0.88	-0.268	151			-0.88	-0.268	151		
	12GHz	-1.30	-0.396	107			-1.30	-0.396	107		
	18GHz	-1.65	-0.503	87			-1.65	-0.503	87		
	28GHz	-2.10	-0.640	70			-2.10	-0.640	70		
	33GHz	-2.60	-0.793	59			-2.60	-0.793	59		

# Aeroflon® DC ~ 50GHz series

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




Raw Cable Part No.		ISA5d					
<b>Mechanical</b>							
Cable Type	Low Loss / Flex Aramid Jacket						
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]	43.1						
Temperature Range	-50°C~135°C						
<b>Electrical</b>							
Operating Frequency	DC ~ 50GHz						
Velocity of Propagation	77% nom.						
RF Leakage	- 90dB						
Insertion Loss [dB]	Symbol	[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				
<b>Average Power Rating [W] @ 25°C, at Sea Level</b>							
1 GHz	320						
3 GHz	185						
6 GHz	131						
12 GHz	93						
28 GHz	61						
40 GHz	51						
50 GHz	45						



# Aeroflon® DC ~ 50GHz series

## Construction

Cable Part No.	ISA5d							
	Solid Type							
Construction								
	<ul style="list-style-type: none"> <li>① Center Conductor</li> <li>② Aeroflon®</li> <li>③ 1<sup>st</sup> Shield(Flat wire)</li> <li>④ 2<sup>nd</sup> Shield(Round wire)</li> <li>⑤ Jacket</li> </ul>							
Part	Material	Diameter						
Center Conductor	Silver Plated Copper [Stranded]	Φ 0.7 [mm] Φ 0.027 [inch]						
Dielectric	Aeroflon® [Extruded]							
1 <sup>st</sup> / 2 <sup>nd</sup> Shield	Silver Plated Copper							
Jacket	Ruggedized Aramid Yarn	Φ 4.60 ± 0.1 [mm] Φ 0.185 ± 0.003 [inch]						

## Electrical & Mechanical Specification

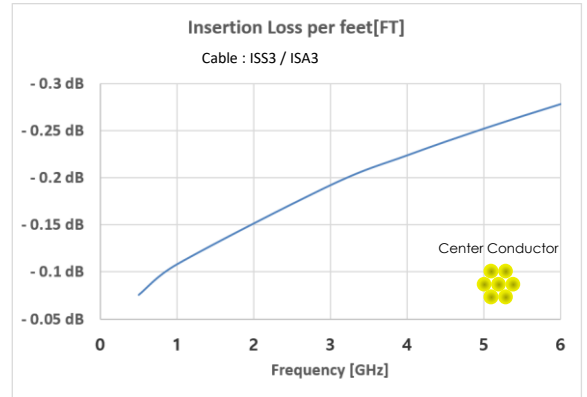
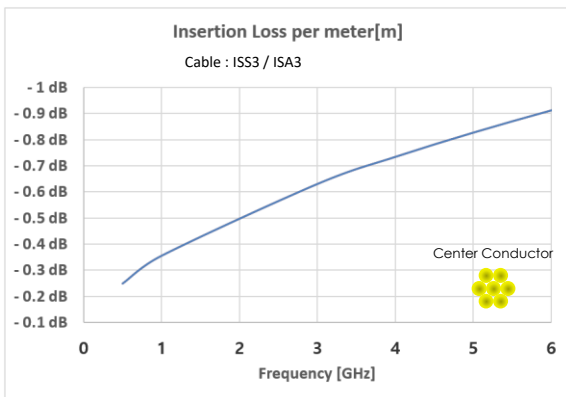
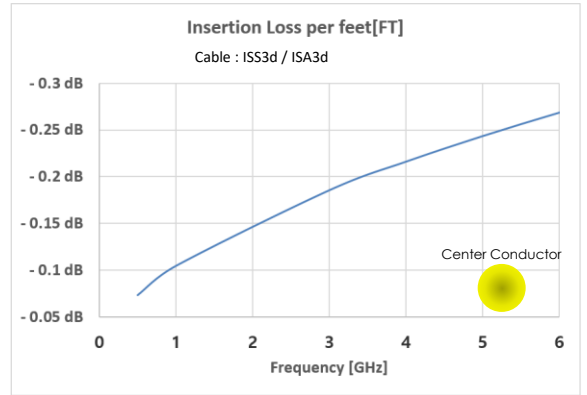
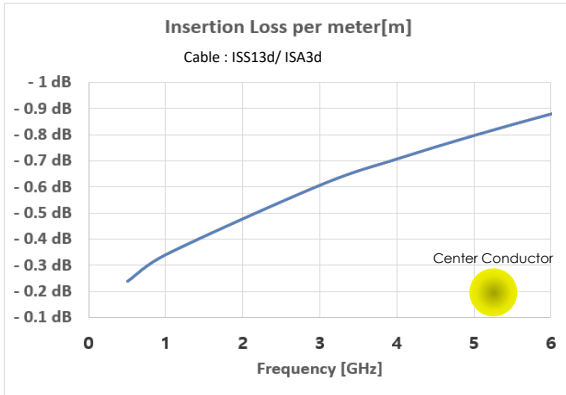
Cable Part No.	ISA5d				
Characteristic Impedance	50 ± 1 Ω				
Operating Frequency	DC to 50 GHz				
Temperature	-50 °C ~ +135 °C				
Velocity of Propagation	77% nominal				
Minimum Bend Radius	20 mm / 0.79 inch				
Weight [g/m]	34.1				
Shielding Effectiveness	< -90 dB				
Phase Stability vs. Flexure	15° max. @50GHz				
Loss Stability vs. Flexure	Δ 0.1dB to 50GHz				
Available Connector	2.4mm				

Frequency	[dB/m]	[dB/FT]	[Watt]						
Raw Cable Insertion Loss [ 25°C, at Sea Level ]  & Average Power Rating[W] [ CW 25°C, at Sea Level ]	1GHz	-0.44	-0.134	320					
	3GHz	-0.78	-0.237	185					
	6GHz	-1.14	-0.347	131					
	12GHz	-1.67	-0.509	193					
	28GHz	-2.73	-0.832	61					
	40GHz	-3.38	-1.031	51					
	50GHz	-3.90	-1.189	45					

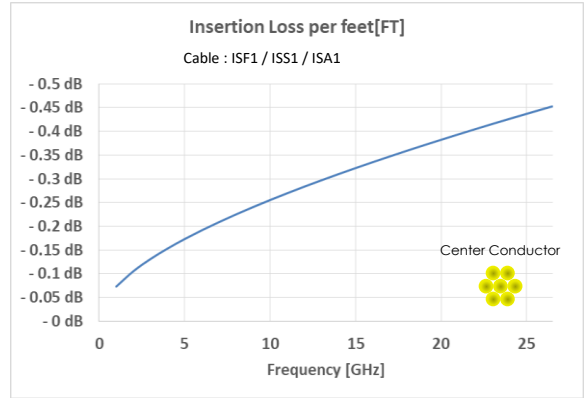
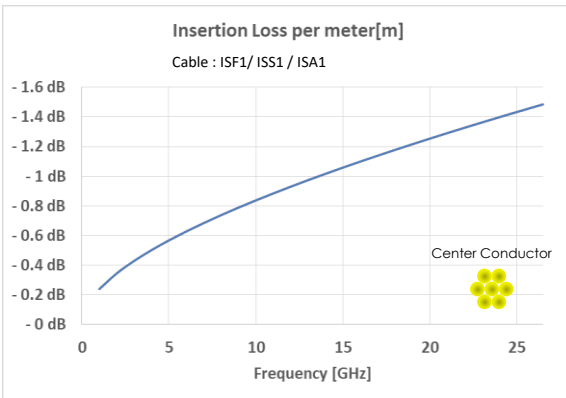
# Electrical Data (Insertion Loss)

## Insertion loss

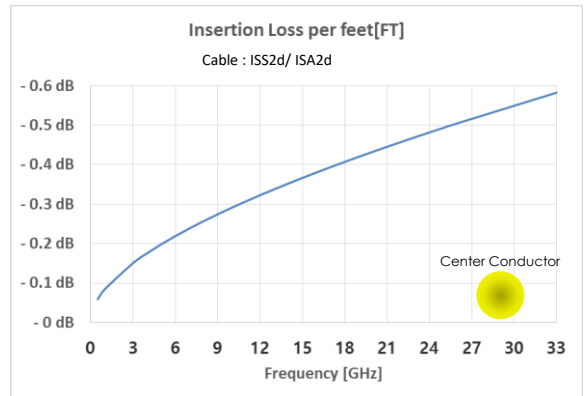
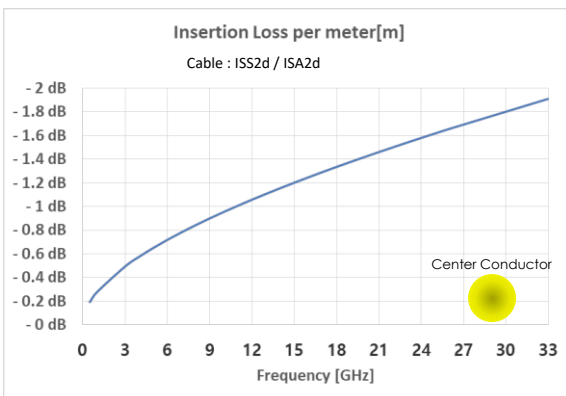
DC ~ 6GHz



DC ~ 26.5GHz



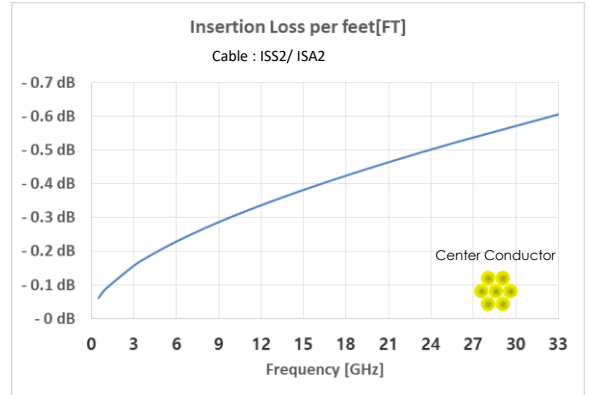
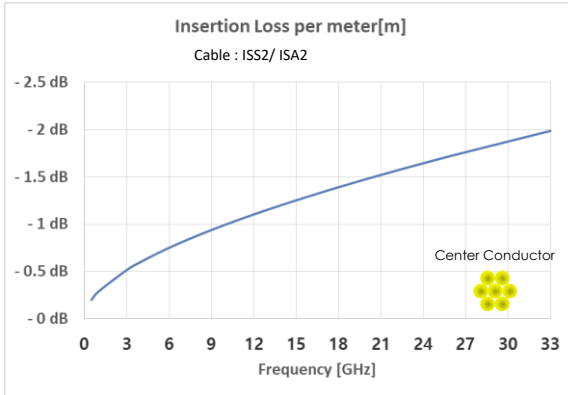
DC ~ 33GHz



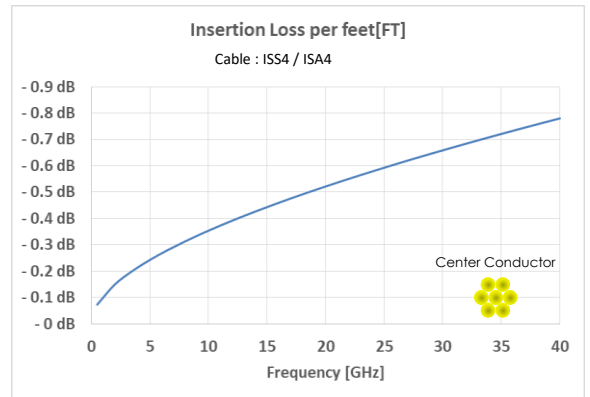
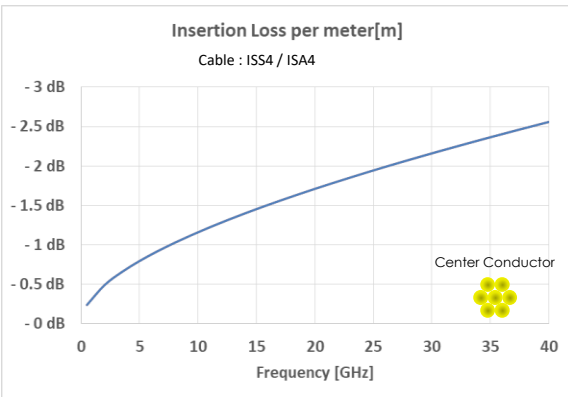
\* Temperature 25°C / 1 atm (sea level)

# Electrical Data (Insertion Loss)

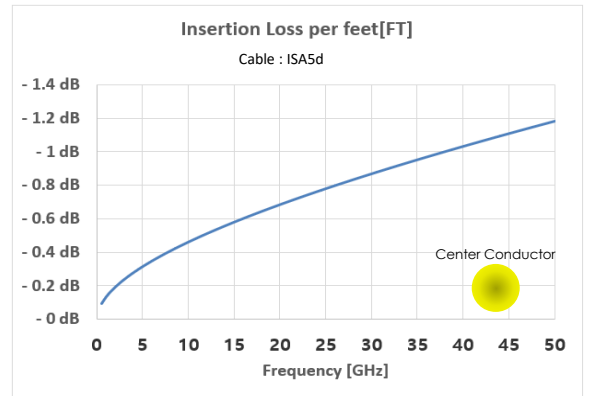
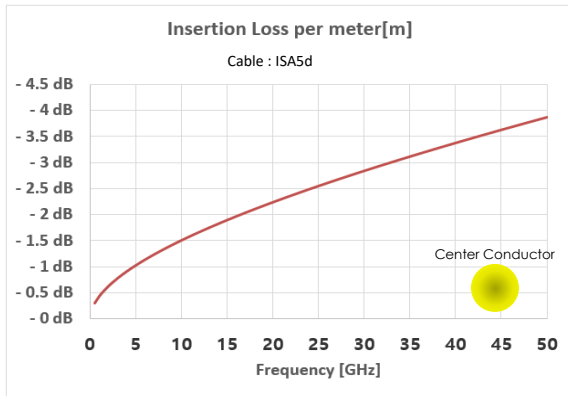
DC ~ 33GHz



DC ~ 40GHz



DC ~ 50GHz

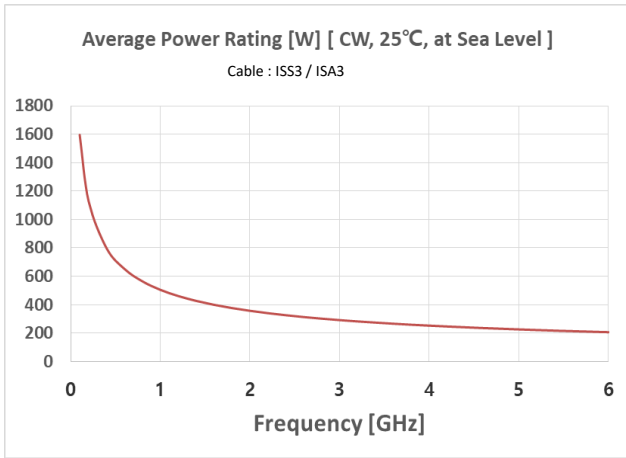


\* Temperature 25°C / 1 atm (sea level)

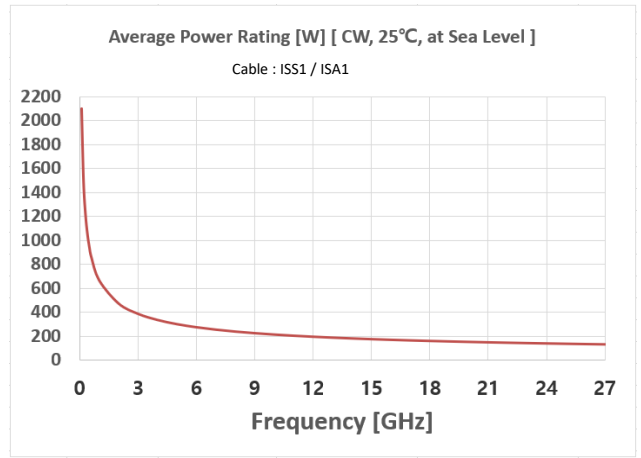
# Electrical Data (Power rating)

## Average Power Rating

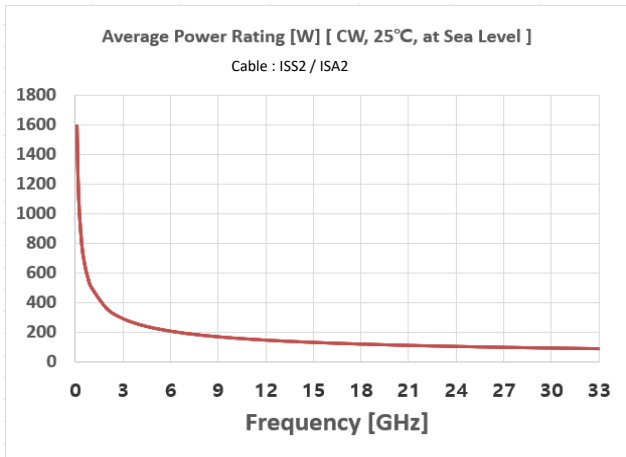
### DC ~ 6GHz



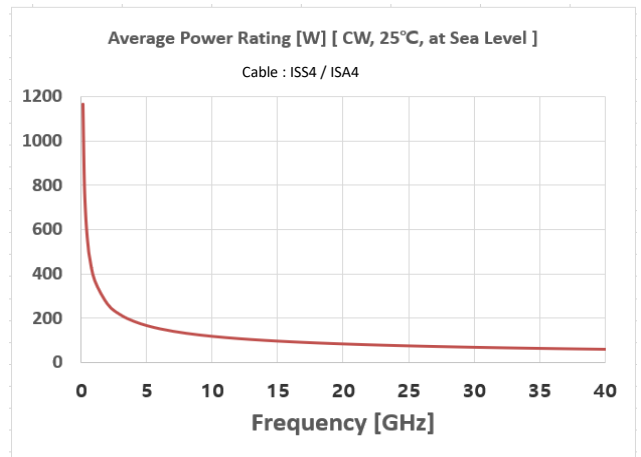
### DC ~ 26.5GHz



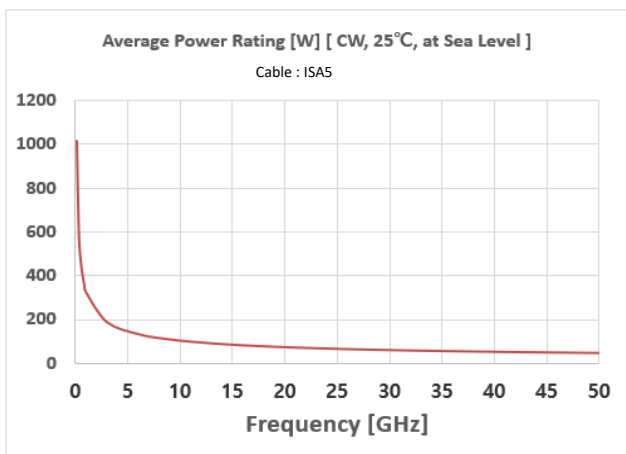
### DC ~ 33GHz



### DC ~ 40GHz



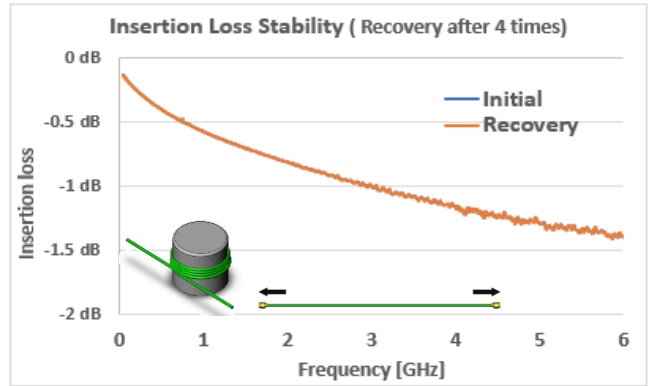
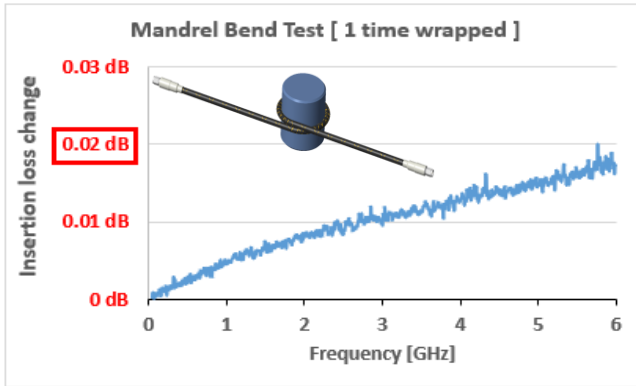
### DC ~ 50GHz



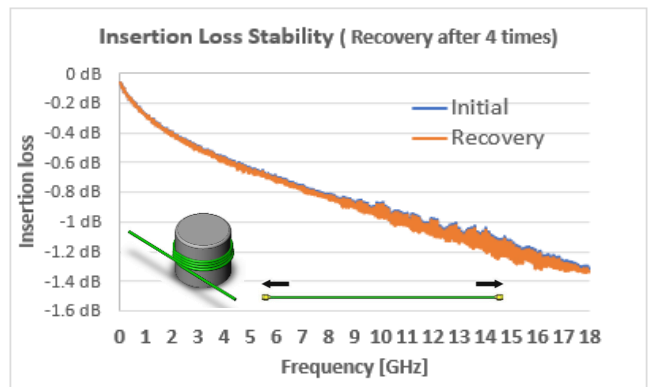
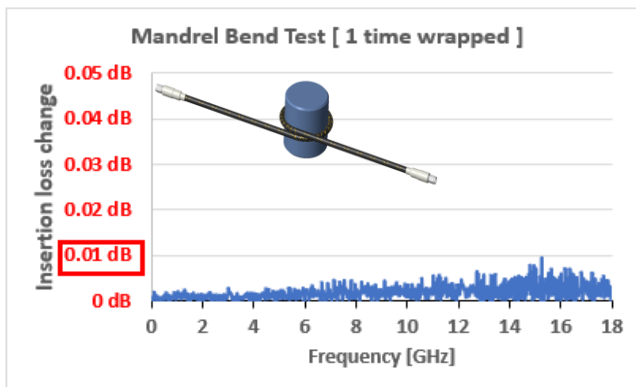
# Electrical Data (IL Stability)

## Insertion loss stability

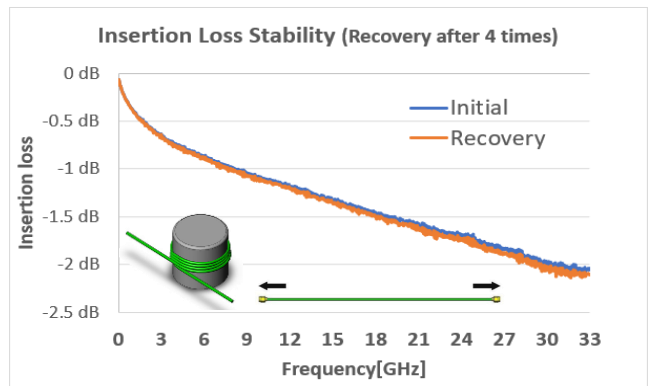
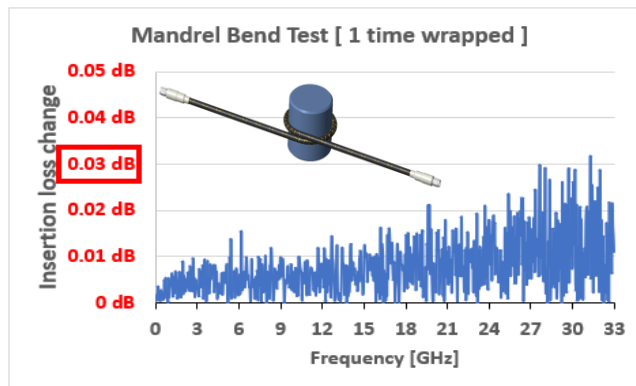
### SMA(m) – ISA3 – SMA(m) – 1,000 mm



### SMA(m) – ISA1 – SMA(m) – 1,000 mm



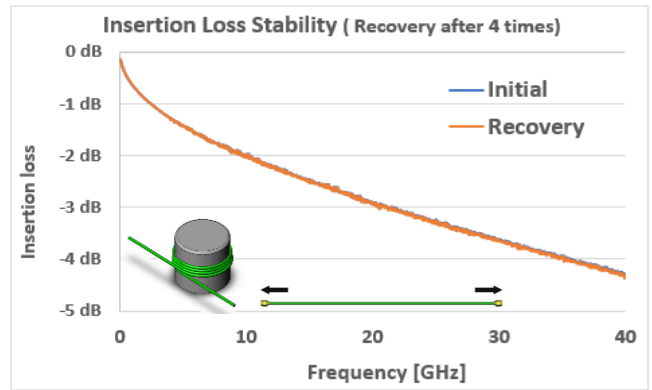
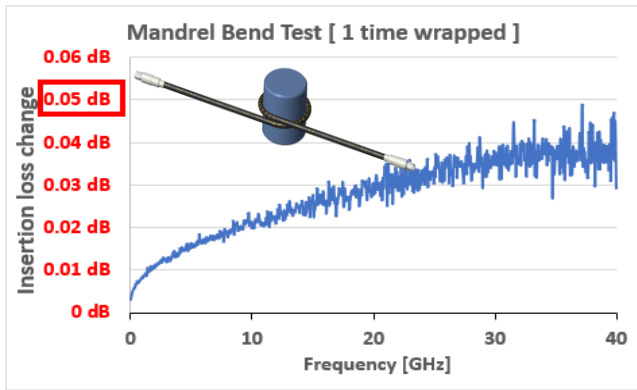
### HFSMA(m) – ISA2 – HFSMA(m) – 1,000 mm



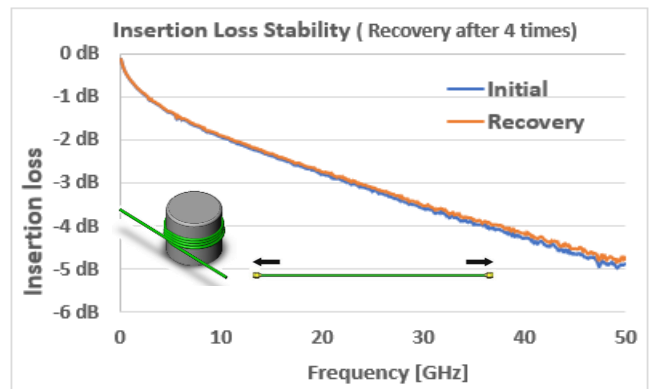
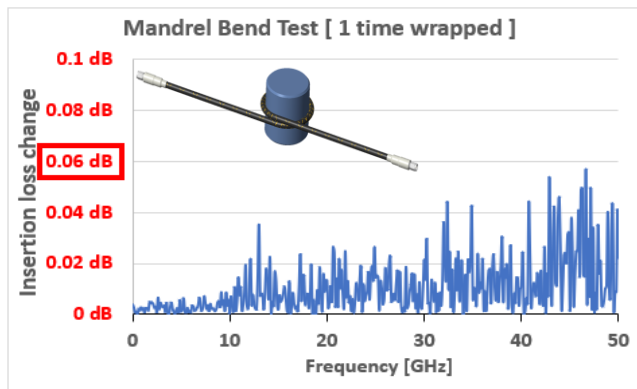
# Electrical Data (IL Stability)

## Insertion loss stability

2.92mm(m) – ISA4 – 2.92mm(m) – 1,000 mm



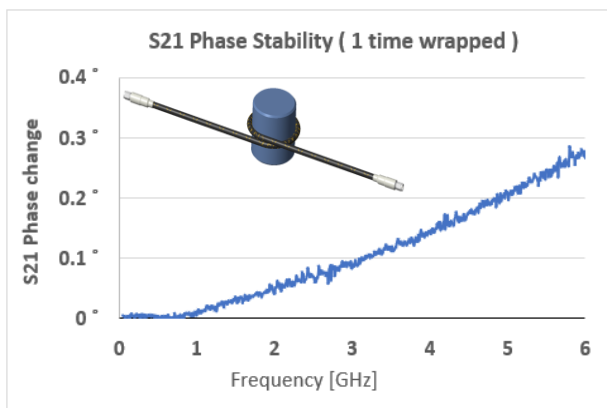
2.4mm(m) – ISA5d – 2.4mm(m) – 1,000 mm



# Electrical Data (Phase Stability)

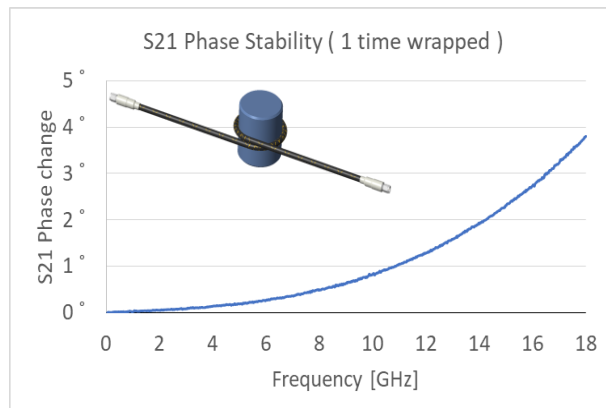
## Phase stability vs. Bending

SMA(m) – ISA3 – SMA(m) – 1,000 mm



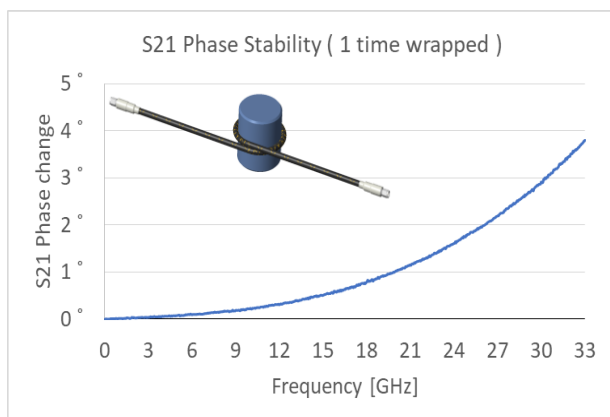
@6GHz ,  $\angle S_{21}$  change  $< 0.3^\circ$

SMA(m) – ISA1 – SMA(m) – 1,000 mm



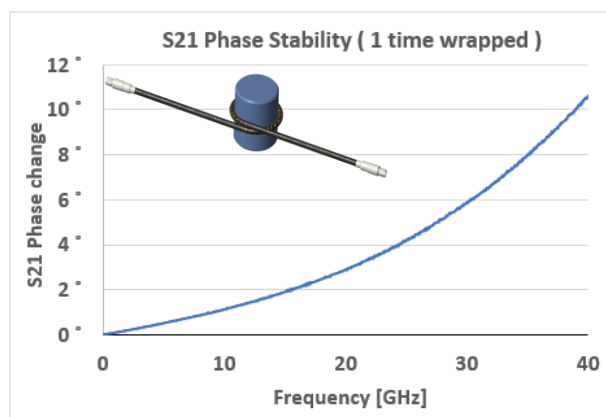
@18GHz ,  $\angle S_{21}$  change  $< 4^\circ$

HFSMA(m) – ISA2 – HFSMA(m) – 1,000 mm



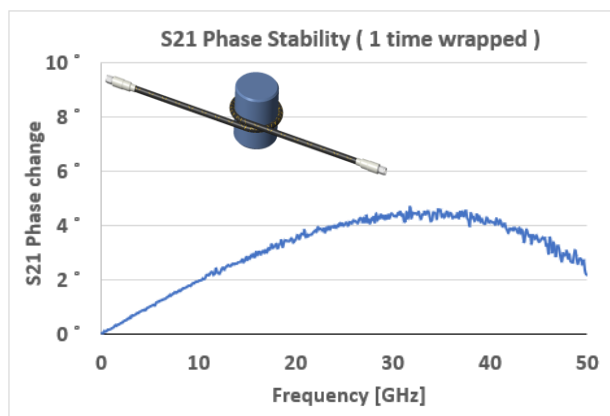
@33GHz ,  $\angle S_{21}$  change  $< 4^\circ$

2.92mm(m) – ISA4 – 2.92mm(m) – 1,000 mm



@40GHz ,  $\angle S_{21}$  change  $< 12^\circ$

2.4mm(m) – ISA5 – 2.4mm(m) – 1,000 mm



@50GHz ,  $\angle S_{21}$  change  $< 6^\circ$



**Microwave Cable Assembly**

**[kate@rfmkorea.com](mailto:kate@rfmkorea.com)**



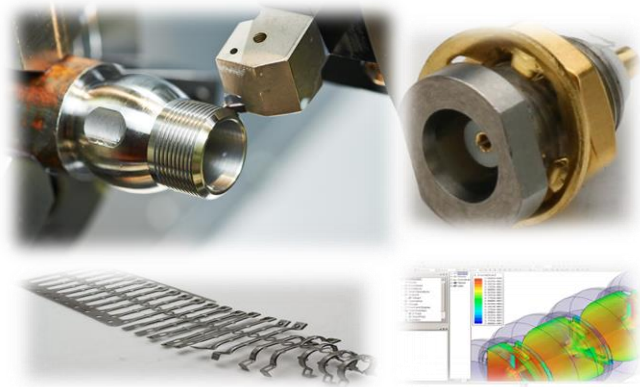


# Microwave Coaxial Connector Technologies

**RFMORECOM** 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

### Precise Connectors

Frequency [GHz]	Connector	Application
DC ~ 40GHz	2.92mm (K)	Panel Mount, package
DC ~ 30GHz	HFSMA®	Panel Mount, package
DC ~ 26.5GHz	SMP, SBC®	Board to Board
DC ~ 18GHz	SMA, N	End Launch, package
DC ~ 6GHz	MCX, MMCX, etc.	PCB Mount, package



### Phase-matched Adapters

Frequency [GHz]	Interface	VSWR Max.
DC ~ 50GHz	2.4mm, SMPM	<1.25
DC ~ 40GHz	2.92mm (K), SMP	<1.25
DC ~ 30GHz	HFSMA®	<1.25
DC ~ 26.5GHz	HFSMA®, SMP	<1.22
DC ~ 18GHz	SMA, N	<1.2
DC ~ 6GHz	MCX, MMCX, etc.	<1.2



**I Solution** 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.

# 2.92mm (K) connector DC ~ 40GHz series

**RFMORECOM** 2.92mm connectors are precision connectors for Microwave applications up to 18GHz. They are compatible with series SMA and 3.5mm connectors.

The special insulator design is excellent for high frequency connection with good stability. 2.92mm connector provides a high ingress protection level against chemicals, fluids, dust.

## Characteristics

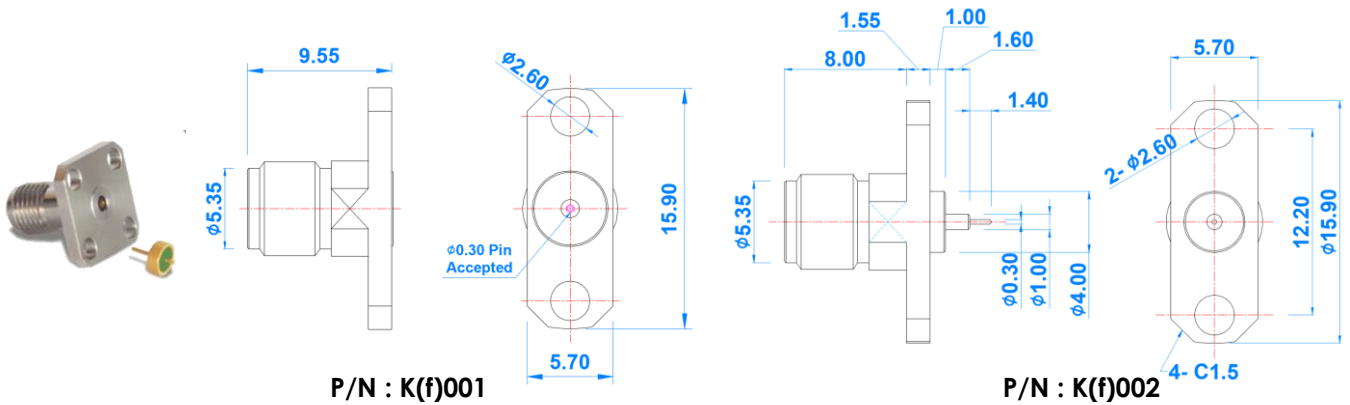
Electrical Characteristics	
Impedance	50 Ω
Frequency range	DC ~ 40GHz
VSWR max.	< 1.32
Insertion Loss	0.03 X √F[GHz]
RF Leakage	-90 dB max
Voltage rating	250 V rms, 50Hz

Environmental Characteristics	
Temperature range	-55°C~125°C
Thermal shock	MIL STD 202, method 107, Condition B
Vibration	MIL STD 202, method 204, Condition D
Corrosion	MIL STD 202, method 101, Condition B
Moisture resistance	MIL STD 202, method 106
Shock	MIL STD 202, method 213, Condition I

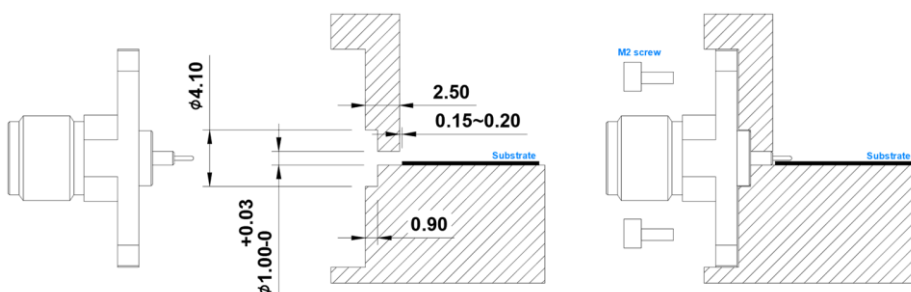
Materials and Plating		
	Material	Plating
Body	Stainless steel	Passivated
Center contact	BeCu	Gold on Nickel
Insulator	ULTEM / PTFE	-

Mechanical Characteristics	
Durability	500 mating
Engage / Disengage	< 23 N cm
Mating torque	80 ~ 110 N cm
Contact captivation	22 N

## Drawing



## Installation



# SMP board to board connector DC ~ 40GHz series

**RFMORECOM** SMP series meets MIL STD 348. SMP connectors are miniaturized push-on Interconnects commonly used in high density, blind-mate systems that can operate up to 40 GHz. SMP connectors are offered in a high frequency 40 GHz version as well as a lower frequency 12 GHz version and are also available.

## Characteristics

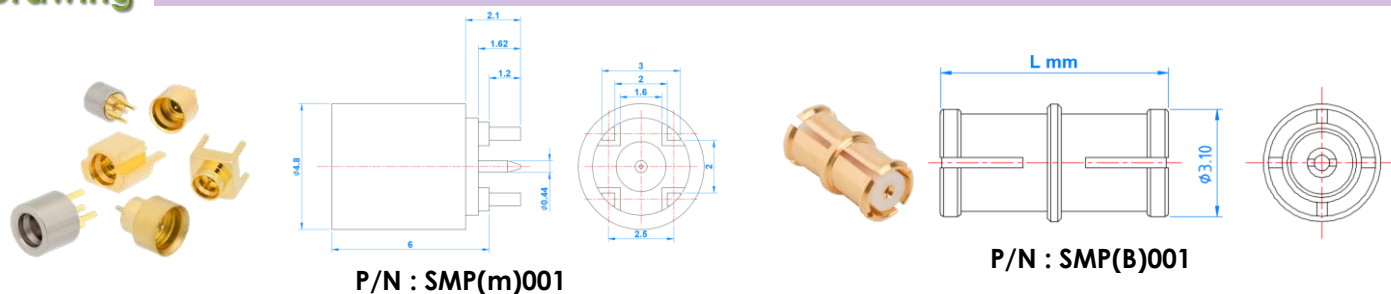
Electrical Characteristics		
Impedance	50 Ω	
Frequency range	DC ~ 40GHz	
VSWR max.	straight	Right angle
	<1.5	<1.7
Insertion Loss	0.15 X √F[GHz]	
RF Leakage	-70 dB @ 6GHz	
Voltage rating	335 V rms, 50Hz	

Environmental Characteristics	
Temperature range	-55°C~125°C
Thermal shock	MIL STD 202, method 107, Condition B
Vibration	MIL STD 202, method 204, Condition D
Moisture resistance	MIL STD 202, method 106
Shock	MIL STD 202, method 213, Condition I

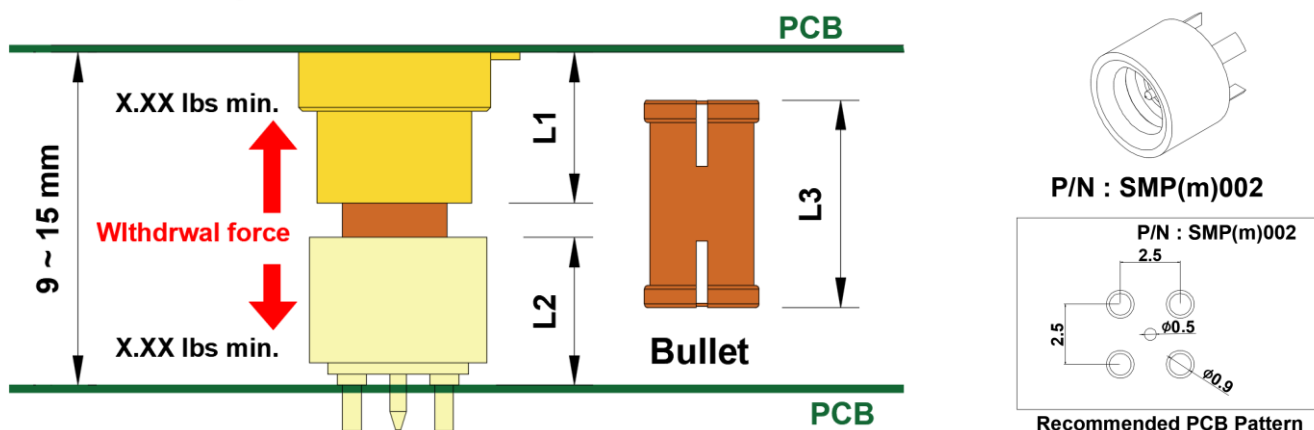
Materials and Plating		
	Material	Plating
Receptacle body	Brass / Stainless steel	Gold / Passivated
Bullet body	BeCu	Gold
Male contact	Brass	Gold
Female contact	BeCu	Gold
Shrouds	Stainless steel	passivated
Insulator	ULTEM / PTFE	-

Mechanical Characteristics			
	Smooth bore	Limited detent	Full detent
Durability(mating)	1000	500	100
Engage	< 9 N	< 45 N	< 68 N
Disengage	> 2 N	> 9 N	> 22 N
Axial misalignment	± 0.3mm		
Radial misalignment	4°		

## Drawing



## Customized design



# SMA connector DC ~ 18GHz series

**RFMORECOM** SMA series meets MIL STD 348. SMA connectors are constructed in male or female gender in standard polarity, reverse polarity (RPSMA / RP-SMA) with 50 Ohm impedance. Types of SMA are available in straight, right angle as well as, press in, bulkhead, 2 hole panel, 4 hole panel, End Launch, edge mount etc.

## Characteristics

### Electrical Characteristics

Impedance	50 Ω
Frequency range	DC ~ 18GHz
VSWR max.	< 1.22
Insertion Loss	0.05 X √F[GHz]
RF Leakage	-90 dB max
Voltage rating	350 V rms, sea level

### Environmental Characteristics

Temperature range	-55°C~125°C
Thermal shock	MIL STD 202, method 107, Condition B
Vibration	MIL STD 202, method 204, Condition D
Corrosion	MIL STD 202, method 101, Condition B
Moisture resistance	MIL STD 202, method 106
Shock	MIL STD 202, method 213, Condition I

### Materials and Plating

	Material	Plating
Body	Brass	Gold on Nickel
Center contact	BeCu	Gold on Nickel
Insulator	PTFE	-

### Mechanical Characteristics

Durability	500 mating
Engage / Disengage	< 23 N cm
Mating torque	80 ~ 110 N cm
Coupling nut retention	270 N

## Pictures



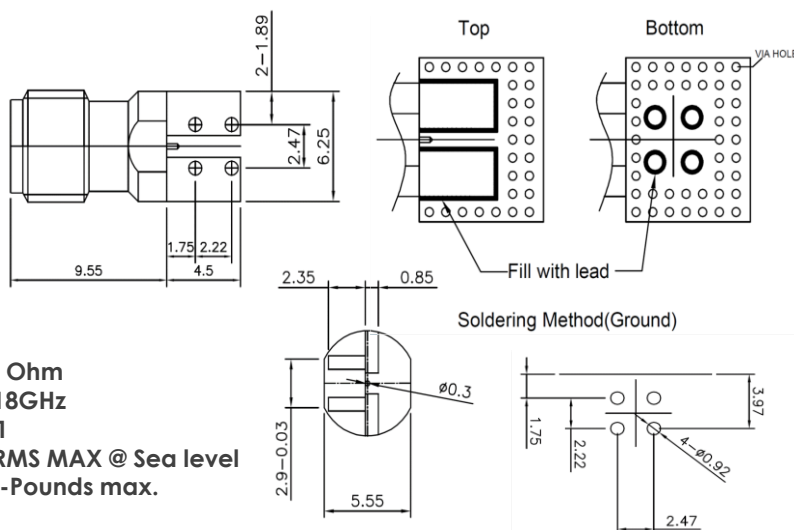
## End Launch SMA



### Specifications :

Characteristic Impedance  
Operating Frequency  
Max. VSWR  
Working Voltage  
Engage/Disengage Torque

50 ± 1 Ohm  
DC ~ 18GHz  
1.25 : 1  
170 VRMS MAX @ Sea level  
2 Inch-Pounds max.



# N connector DC ~ 18GHz series

RFMORECOM N series meets MIL STD 348. Type N frequency range extends to 18GHz.

The screw type coupling mechanism provides a reliable connection. Many types of N are available in straight, right angle as well as, press in, bulkhead, 2 hole panel, 4 hole panel.

Type N connectors are offered in a high frequency 18 GHz version as well as a lower frequency 12 GHz version and are also available.

## Characteristics

### Electrical Characteristics

Impedance	50 Ω
Frequency range	DC ~ 18GHz
VSWR max.	< 1.22
Insertion Loss	0.04 X √F[GHz]
RF Leakage	-90 dB max
Voltage rating	1000 V rms, 50 Hz

### Environmental Characteristics

Temperature range	-55°C~125°C
Thermal shock	MIL STD 202, method 107, Condition B
Vibration	MIL STD 202, method 204, Condition D
Corrosion	MIL STD 202, method 101, Condition B
Moisture resistance	MIL STD 202, method 106
Shock	MIL STD 202, method 213, Condition I

### Materials and Plating

	Material	Plating
Body	Brass / Stainless steel	Gold / passivated
Center contact	Brass, BeCu (female)	Gold on Nickel
Insulator	ULTEM / PTFE	-

### Mechanical Characteristics

Durability	500 mating
Engage / Disengage	< 6.6 N cm
Mating torque	150 ~ 170 N cm
Coupling nut retention	450 N

## Pictures



# RF & Microwave adapters

**RFMORECOM** all adapter meets MIL STD 348. we are manufacturing a wide range of adapters within / between series.

## Line up

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

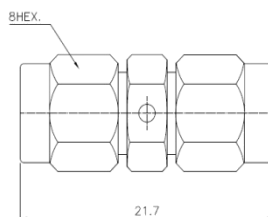
## General Series

### Picture

### Drawing

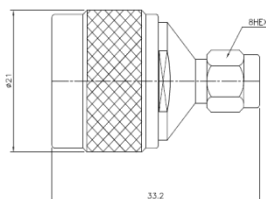
### Specification

**SMA(m) to SMA(m)**



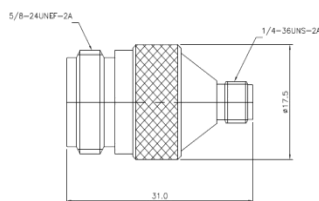
Frequency : DC ~ 18GHz  
 VSWR : 1.20 Max  
 Impedance : 50 ohm  
 DWV : 1200V rms Max  
 Mating cycle : 500 times min

**N(m) to SMA(m)**



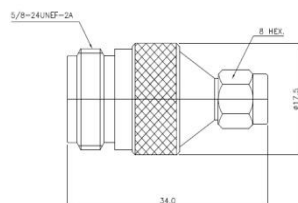
Frequency : DC ~ 6GHz  
 VSWR : 1.20 Max  
 Impedance : 50 ohm  
 DWV : 1200V rms Max  
 Mating cycle : 500 times min

**N(f) to SMA(f)**



Frequency : DC ~ 8GHz  
 VSWR : 1.20 Max  
 Impedance : 50 ohm  
 DWV : 1200V rms Max  
 Mating cycle : 500 times min


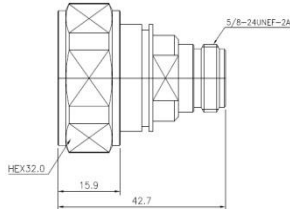

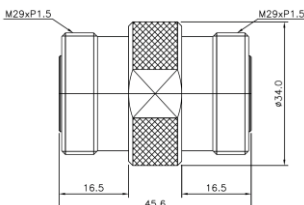

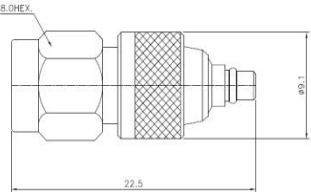
**N(f) to SMA(m)**



Frequency : DC ~ 9GHz  
 VSWR : 1.20 Max  
 Impedance : 50 ohm  
 DWV : 1200V rms Max  
 Mating cycle : 500 times min

# RF & Microwave adapters

## General Series

Picture	Drawing	Specification
 <p data-bbox="44 395 225 426"><b>N(f) to SMA(f)</b></p>		<p>Frequency : DC ~ 9GHz                      VSWR : 1.20 Max                      Impedance : 50 ohm                      DWV : 1200V rms Max                      Mating cycle : 500 times min</p>
 <p data-bbox="44 665 194 696"><b>N(f) to N(f)</b></p>		<p>Frequency : DC ~ 11GHz                      VSWR : 1.25 Max                      Impedance : 50 ohm                      DWV : 2500V rms Max                      Mating cycle : 500 times min</p>
 <p data-bbox="44 934 229 965"><b>DIN(m) to N(f)</b></p>		<p>Frequency : DC ~ 6GHz                      VSWR : 1.20 Max                      Impedance : 50 ohm                      DWV : 2500V rms Max                      Mating cycle : 500 times min</p>
 <p data-bbox="44 1214 251 1245"><b>DIN(m) to N(m)</b></p>		<p>Frequency : DC ~ 6GHz                      VSWR : 1.20 Max                      Impedance : 50 ohm                      DWV : 2500V rms Max                      Mating cycle : 500 times min</p>
 <p data-bbox="44 1483 239 1514"><b>DIN(f) to DIN(f)</b></p>		<p>Frequency : DC ~ 6GHz                      VSWR : 1.20 Max                      Impedance : 50 ohm                      DWV : 2500V rms Max                      Mating cycle : 500 times min</p>
 <p data-bbox="44 1752 329 1783"><b>SMA(m) to MMCX(m)</b></p>		<p>Frequency : DC ~ 6GHz                      VSWR : 1.2 Max                      Impedance : 50 ohm                      DWV : 1000V rms Max                      Mating cycle : 500 times min</p>



# RF & Microwave adapters (Phase Matched)

DC ~ 40GHz

DC ~ 50GHz

RFMORECOM Phase Matched adapter meets MIL STD 348. we are manufacturing a wide range of adapters within / between series. Matched adapters have the same nominal connector mating reference plane to reference plane length.

The connector mating plane is the plane along which two mating connector outer conductors come together. All adapter's phase difference range is  $\pm 2$  degree.



Unit [mm]

## Between Series

Part No.	Drawing	Specification
<p><b>2.4mm(m) to 2.92mm(m)</b></p> <p>IADK201</p>	<p>20.50</p>	<p><b>Frequency : DC ~ 40GHz</b>                      VSWR : 1.22 Max                      Impedance : 50 ohm                      Insertion loss : 0.15dB Max @ 40GHz                      Mating cycle : 500 times min.</p>
<p><b>2.4mm(m) to 2.92mm(f)</b></p> <p>IADK203</p>	<p>19.45</p>	<p><b>Frequency : DC ~ 40GHz</b>                      VSWR : 1.22 Max                      Impedance : 50 ohm                      Insertion loss : 0.15dB Max @ 40GHz                      Mating cycle : 500 times min.</p>
<p><b>2.4mm(f) to 2.92mm(m)</b></p> <p>IADK202</p>	<p>21.45</p>	<p><b>Frequency : DC ~ 40GHz</b>                      VSWR : 1.22 Max                      Impedance : 50 ohm                      Insertion loss : 0.15dB Max @ 40GHz                      Mating cycle : 500 times min.</p>
<p><b>2.4mm(f) to 2.92mm(f)</b></p> <p>IADK204</p>	<p>20.40</p>	<p><b>Frequency : DC ~ 40GHz</b>                      VSWR : 1.22 Max                      Impedance : 50 ohm                      Insertion loss : 0.15dB Max @ 40GHz                      Mating cycle : 500 times min.</p>

# RF & Microwave adapters (Phase Matched)

DC ~ 40GHz

DC ~ 50GHz

Unit [mm]

## In Series

Part No.	Drawing	Specification
<p>2.4mm(m) to 2.4mm(m)</p> <p>IAD2201</p>		<p><b>Frequency : DC ~ 50GHz</b>                      VSWR : 1.25 Max                      Impedance : 50 ohm                      Insertion loss : 0.25dB Max @ 50GHz                      Mating cycle : 500 times min.</p>
<p>2.4mm(f) to 2.4mm(m)</p> <p>IAD2203</p>		<p><b>Frequency : DC ~ 50GHz</b>                      VSWR : 1.25 Max                      Impedance : 50 ohm                      Insertion loss : 0.25dB Max @ 50GHz                      Mating cycle : 500 times min.</p>
<p>2.4mm(f) to 2.4mm(f)</p> <p>IAD2202</p>		<p><b>Frequency : DC ~ 50GHz</b>                      VSWR : 1.25 Max                      Impedance : 50 ohm                      Insertion loss : 0.25dB Max @ 50GHz                      Mating cycle : 500 times min.</p>
<p>2.92mm(m) to 2.92mm(m)</p> <p>IADKK01</p>		<p><b>Frequency : DC ~ 40GHz</b>                      VSWR : 1.22 Max                      Impedance : 50 ohm                      Insertion loss : 0.15dB Max @ 40GHz                      Mating cycle : 500 times min.</p>
<p>2.92mm(f) to 2.92mm(m)</p> <p>IADKK03</p>		<p><b>Frequency : DC ~ 40GHz</b>                      VSWR : 1.22 Max                      Impedance : 50 ohm                      Insertion loss : 0.15dB Max @ 40GHz                      Mating cycle : 500 times min.</p>
<p>2.92mm(f) to 2.92mm(f)</p> <p>IADKK02</p>		<p><b>Frequency : DC ~ 40GHz</b>                      VSWR : 1.22 Max                      Impedance : 50 ohm                      Insertion loss : 0.15dB Max @ 40GHz                      Mating cycle : 500 times min.</p>



**Microwave Cable Assembly**

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