

Technical Characteristics

Lab-Flex T Series	ASR	ASR-F
Electrical		
Frequency, Max (GHz)	50	50
Impedance, nominal (Ω)	50	50
Velocity of Propagation (%)	76.5	74
Shielding Effectiveness, 18 GHz (dB/ft)	>100	>90
Capacitance (pF/ft)	26.9	26.7
Delay (ns/ft), (ns/meter)	1.33 (4.37)	1.37 (4.40)
Attenuation k1 (db/100ft) @ 25°C	0.54	0.4332
Attenuation k2 (db/100ft) @ 25°C	0.0003	0.000531

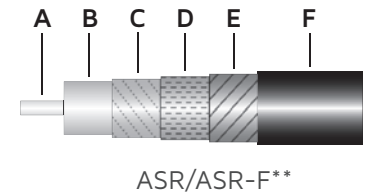
Attenuation (Typical) at any Frequency = $k_1 \times \text{SqRt}(\text{FMHz}) + k_2 \times (\text{FMHz})$

Mechanical & Environmental

Temperature Range (°C)	-55 to +100	-65 to +200
Minimum Bend Radius (inch), (mm)	1.5, 38.10	1.5, 38.10

Construction

Inner Conductor	A	Solid SPC	Solid SPC
Dielectric	B	ePTFE	ePTFE
First Outer Shield	C	Tin Plated Copper	SPC Flat
Second Outer Shield	D	Polyolefin Protection	Metalized Foil
Third Outer Shield	E	-	SPC Round
Jacket (inch O.D.)	F	(.290) Stainless Steel Armor	**FEP



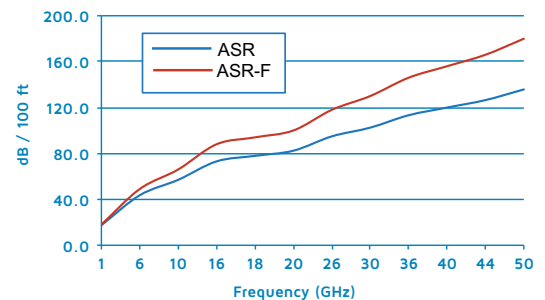
**ASR-F has Monocoil Armor, extruded Silicone and Abrasion jacket over FEP. Typical diameter is .340 inches

Attenuation (dB/100ft)

GHz	ASR	ASR-F
1	17.4	18.0
6	43.6	49.0
10	57.0	66.0
16	73.1	88.0
18	77.9	94.0
20	82.4	100.0
26	94.9	118.0
30	102.5	130.0
36	113.3	146.0
40	120.0	156.0
44	126.5	166.0
50	135.8	180.0

Typical Cable Loss at +25° C & Sea Level

Attenuation vs Frequency

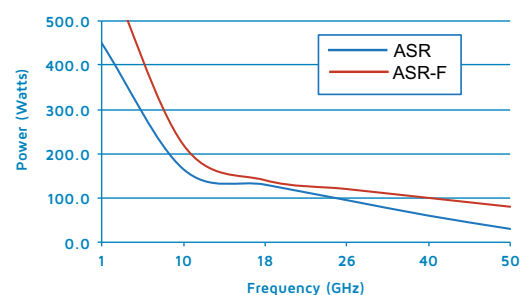


Average Power Rating (Watts)

GHz	ASR	ASR-F
1	450.0	650.0
10	165.0	220.0
18	130.0	140.0
26	95.0	120.0
40	60.0	100.0
50	30.0	80.0

Cable Power handling at +25° C & Sea Level

Average Power Rating



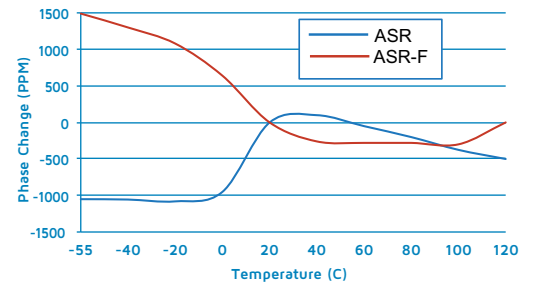
Technical Characteristics

Phase vs. Temperature (PPM)

Temperature (°C)	ASR	ASR-F
-55.0	-1050.0	1490.0
-40.0	-1055.0	1300.0
-20.0	-1080.0	1080.0
0.0	-950.0	640.0
20.0	0.0	0.0
40.0	100.0	-260.0
60.0	-50.0	-280.0
80.0	-200.0	-280.0
100.0	-375.0	-300.0
120.0	-500.0	0.0

Typical Values

Phase vs. Temperature (°C)

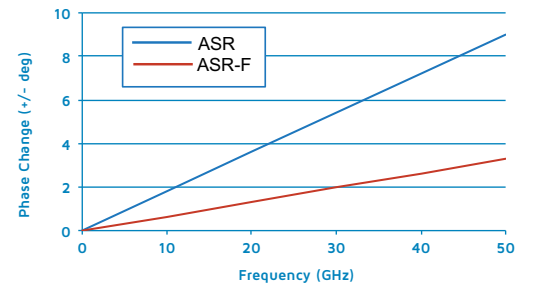


Phase vs. Flexure

Frequency (GHz)	ASR (+/-deg)	ASR-F (+/-deg)
0	0	0
10	1.8	0.6
20	3.6	1.3
30	5.4	2
40	7.2	2.6
50	9	3.3

Typical Values +25° C

Phase vs. Flexure



Cable Code	Connector Code	Series	Gender	Type	C-Nut Style ¹	Body Material ²	Body Finish ³	Loss per GHz	Frequency Max GHz
ASR-F	SMS	SMA	Male	Straight	HK	SS	P	0.01	18
ASR, ASR-F	NMS	Type-N	Male	Straight	HK	SS	P	0.01	18
ASR, ASR-F	NFS	Type-N	Female	Straight	N/A	SS	P	0.015	18
ASR, ASR-F	S3KMS	3.5mm	Male	Straight	HK	SS	P	0.01	35
ASR, ASR-F	S3KFS	3.5mm	Female	Straight	N/A	SS	P	0.015	35
ASR, ASR-F	NMD-S3KFS	3.5mm	Female	Straight	HK	SS	P	0.015	35
ASR, ASR-F	KMS	2.92mm	Male	Straight	HK	SS	P	0.01	40
ASR, ASR-F	KFS	2.92mm	Female	Straight	N/A	SS	P	0.015	40
ASR, ASR-F	NMD-KFS	2.92mm	Female	Straight	HK	SS	P	0.015	50
ASR, ASR-F	MMS	2.4mm	Male	Straight	HK	SS	P	0.01	50
ASR, ASR-F	MFS	2.4mm	Female	Straight	N/A	SS	P	0.015	50
ASR, ASR-F	NMD-MFS	2.4mm	Female	Straight	HK	SS	P	0.015	50

¹ C-Nut Style: H=Hex, K=Knurled, HK=Hex Nut & Knurled
² Body Materials: B=Brass, SS=Stainless, Be=Beryllium Copper
³ Body Finish: N=Nickel, S=Silver, G=Gold, P=Passivated
 Sex of connector is determined by center conductor

Cable Code	Option Code	Option Description	Option Details
ASR, ASR-F	+/-2.8 ps ⁴	Phase Match	Standard Tolerance of +/-2.8ps

⁴for phase matched assemblies (+/-2.8ps) is required to be added to the end of standard part number
 example: NMS-200ASR-120.0-NMS +/-2.8ps

Custom Options:

The above connectors and options represent the most common types used. Smiths Interconnect offers a wide range of cables, connectors and options. If you do not see an option you require please consult the sales department.