



To provide improved electrical and mechanical performance over traditional hand-formable designs, Insulated Wire presents Re-Flex™.

Available in 0.085", 0.141" and 0.235" diameters (identified as RF085, RF141 and RF250), IW's RF cable series offers the advantages of the same lamination process used on our Low Loss products. Combined with the same double shield construction plus a solder-free tin/alloy plated outer braid, the Re-Flex™ design provides a re-formable cable that will not develop micro-fractures with repeated flexing, eliminating manufacturability issues associated with conformable style RG cables.

Both RF085 and RF141 are industry standard line sizes, consequently a wide range of connector types and styles can be used with these cables, including:

SMA, TNC, N, GPO™, GPPO™, 2.92mm/K™, 2.4mm and 1.85mm/V™, with performance up to 60GHz. RF250 is commonly used for higher power applications with SMA, TNC, N, SC and HN connectors available.

Re-Flex™ assemblies can be employed wherever a semi-rigid or conformable cable type is currently used, and with FEP™ jacket available as a standard option, Re-Flex™ provides greater versatility.

Just ask our customers.



Re-Flex™ Cable - Key Performance Parameters

Cable Type	Maximum Frequency (cable only)	Attenuation (dB/ft., max)				Bend Radius (inch)	Replaces
		10 GHz	18 GHz	32 GHz	60 GHz		
RF085	62 GHz	0.60	0.91	1.28	2.01	0.125	RG405
RF141	34 GHz	0.41	0.60	0.88	-	0.250	RG402
RF250	19.5 GHz	0.29	0.44	-	-	0.375	RG401

Re-Flex™ Cable - Availability

Cable Type	AMS-DTL-23053 Jacket Available	FEP Jacket Available	Distribution Stock
RF085	Yes	Yes	SMA (m) to SMA (m) direct solder, 3" and up
RF141	Yes	Yes	SMA (m) to SMA (m) direct solder, 3" and up SMA (m) to SMA (m) shell style, 2" and up
RF250	Yes	Yes	-



RF085 Series Operating Up to 62 GHz



Center Conductor
Silver Plated
Copper

Dielectric
PTFE

Foil
Silver Plated
Copper

Braid
Tin Plated
Copper
(2.15mm 0.085")

RF085

Electrical Characteristics

Impedance	50 +/- 2Ω
Cut Off Frequency (cable only, max)	62 GHz
Capacitance	29 pF/ft.
Velocity of Propagation	71%
Time Delay	1.40 ns/ft.
Shielding Effectiveness up to 18GHz	>90 dB
Power Handling	See Chart

Mechanical Characteristics:

Weight	.017 oz/ft (16g/m)
Minimum Bend Radius inches (mm)	.125" (3.175mm)

Environmental Characteristics:

Operating Temperature Range ¹	-65°C to +165°C
RoHS (2002/95/EC)	Available on request

VSWR for assemblies with two straight connectors

1.35:1 to 18 GHz

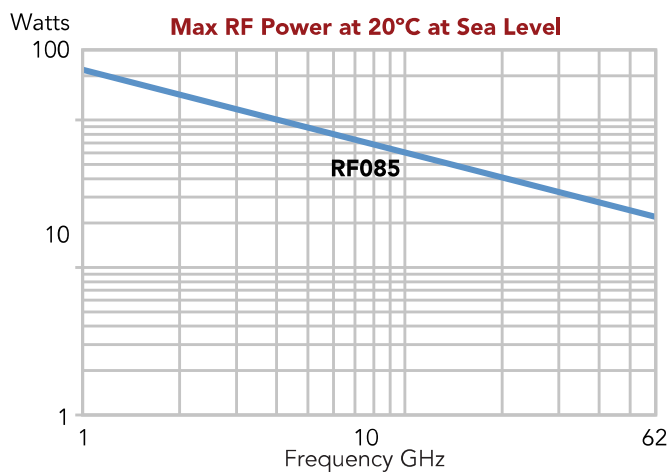
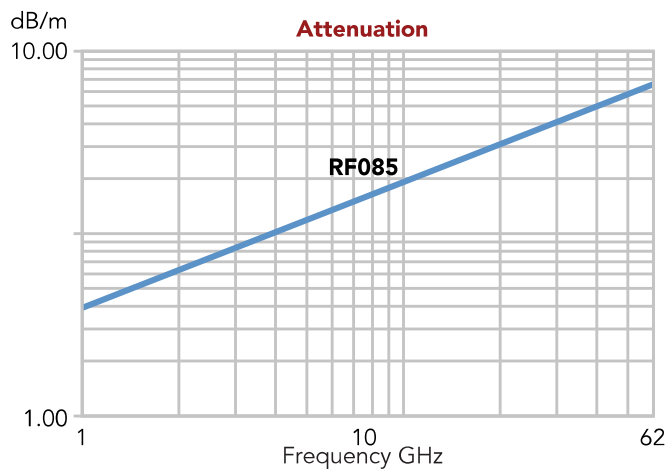
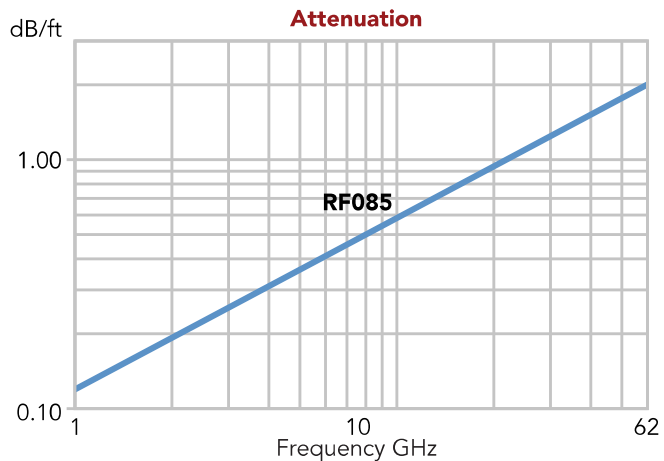
FEP Jacket available



RF085 Series (Continued)

Insertion Loss

GHz	RF085		Power(W) @ 20°C @ Sea Level
	dB/ft.	dB/m	
0.04	0.12	0.39	270
1	0.19	0.63	220
2	0.28	0.92	200
4	0.41	1.34	120
6	0.51	1.68	85
8	0.61	1.98	75
10	0.69	2.26	70
12	0.77	2.51	65
14	0.84	2.75	60
16	0.91	2.98	55
18	0.98	3.20	50
20	1.04	3.42	45
22	1.10	3.62	43
24	1.17	3.82	42
26	1.23	4.02	40
28	1.28	4.21	39
30	1.34	4.40	39
32	1.40	4.58	37
34	1.45	4.76	36
36	1.51	4.94	35
38	1.56	5.11	32
40	1.61	5.28	30
42	1.66	5.45	29
44	1.71	5.62	28
46	1.76	5.79	27
48	1.81	5.95	26
50	1.86	6.11	25
52	1.91	6.27	25
54	1.96	6.43	25
56	2.01	6.59	23
58	2.06	6.74	23
60	2.10	6.90	22
62	2.15	7.05	22





RF141 Series Operating Up to 34 GHz



Center Conductor
Silver Plated
Copper

Dielectric
PTFE

Foil
Silver Plated
Copper

Braid
Tin Plated
Copper
(3.58mm 0.141")

RF141

Electrical Characteristics

Impedance	50 +/- 2Ω
Cut Off Frequency (cable only, max)	34 GHz
Capacitance	29 pF/ft.
Velocity of Propagation	71%
Time Delay	1.40 ns/ft.
Shielding Effectiveness up to 18GHz	>90 dB
Power Handling	See Chart

Mechanical Characteristics:

Weight	.402 oz/ft (37g/m)
Minimum Bend Radius inches (mm)	.250" (6.4mm)

Environmental Characteristics:

Operating Temperature Range ¹	-65°C to +165°C
RoHS (2002/95/EC)	Available on request

VSWR for assemblies with two straight connectors 1.35:1 to 18 GHz

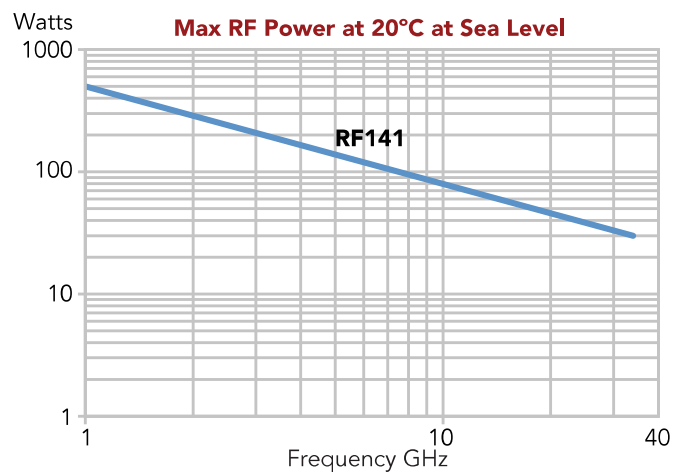
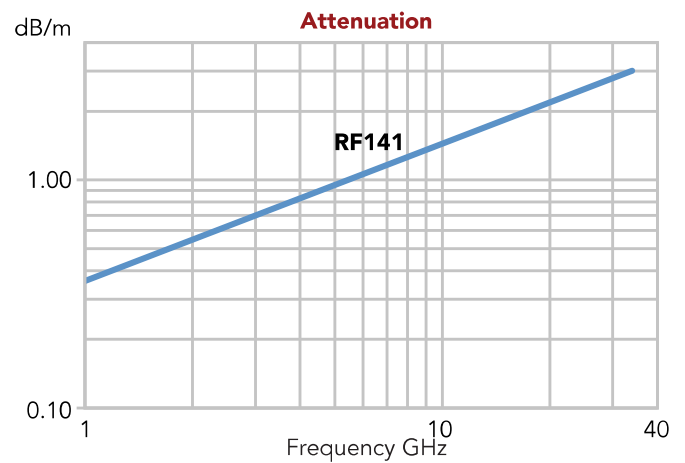
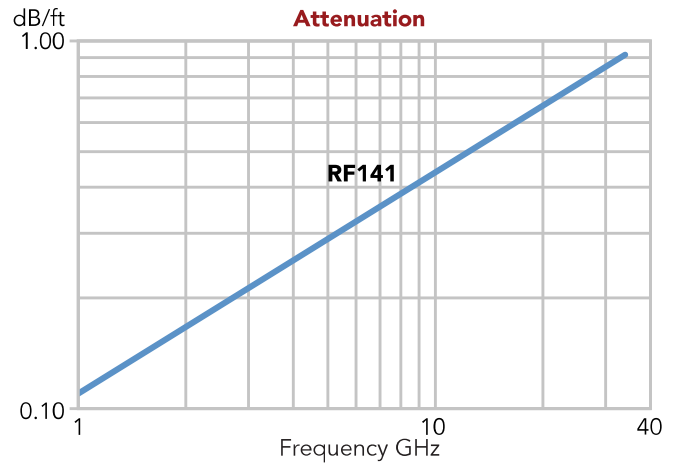
FEP Jacket available



RF141 Series (Continued)

Insertion Loss

GHz	RF141		Power(W) @ 20°C @ Sea Level
	dB/ft.	dB/m	
0.04	0.07	0.22	700
1	0.11	0.36	500
2	0.16	0.53	350
4	0.24	0.78	240
6	0.30	0.99	190
8	0.36	1.18	160
10	0.41	1.36	150
12	0.46	1.52	140
14	0.51	1.68	130
16	0.56	1.83	120
18	0.60	1.97	110
20	0.64	2.11	100
22	0.68	2.25	90
24	0.73	2.38	80
26	0.77	2.51	70
28	0.80	2.64	60
30	0.84	2.76	50
32	0.88	2.89	40
34	0.92	3.01	30





RF250 Series Operating Up to 18 GHz



Center Conductor
Silver Plated
Copper

Dielectric
PTFE

Foil
Silver Plated
Copper

Braid
Tin Plated
Copper
(5.84mm 0.230")

RF250

Electrical Characteristics

Impedance	50 +/- 2Ω
Cut Off Frequency (cable only, max)	18 GHz
Capacitance	24 pF/ft.
Velocity of Propagation	71%
Time Delay	1.22 ns/ft.
Shielding Effectiveness up to 18GHz	>90 dB
Power Handling	See Chart

Mechanical Characteristics:

Weight	1.0 oz/ft (97g/m)
Minimum Bend Radius inches (mm)	.375" (9.5mm)

Environmental Characteristics:

Operating Temperature Range ¹	-65°C to +165°C
RoHS (2002/95/EC)	Available on request

VSWR for assemblies with two straight connectors 1.35:1 to 18 GHz

FEP Jacket available



RF250 Series (Continued)

Insertion Loss

GHz	RF250		Power(W) @ 20°C @ Sea Level
	dB/ft.	dB/m	
0.04	0.03	0.10	1300
1	0.07	0.23	1100
2	0.11	0.36	800
4	0.17	0.56	520
6	0.22	0.72	450
8	0.26	0.85	380
10	0.29	0.95	350
12	0.34	1.12	310
14	0.37	1.21	300
16	0.41	1.34	280
18	0.44	1.44	270

