

# SW Series Cable

The SW Series provides low loss cable solutions that bridge the gap between lower performance RG cables and expensive high performance cables. This series employs the same microporous PTFE dielectrics used in high performance, low loss cables, but offers a simple double braid construction. This construction gives the SW series exceptional electrical performance and allows for simplified connector attachments to reduce overall costs. The SW060, SW086 and SW150 cable sizes can be assembled with standard semirigid or RG style crimp on connectors.



## CABLE PROPERTIES

### Mechanical Properties

	SW060	SW086	SW110	SW150	SW180
Jacket O.D. (in)	.060	.090	.118	.153	.196
Round Braid O.D. (in)	.049	.083	.096	.136	.180
Flat Braid O.D. (in)	.039	.065	.080	.120	.163
Dielectric O.D. (in)	.033	.059	.074	.108	.151
Center Conductor O.D. (in)	.012	.020	.025	.036	.051
Center Conductor Type	Solid	Solid	Solid	Solid	Solid
Inside Min Bend Radius (in)	.275	.4	.5	.8	1.0
Operating Temperature (°C)	-65/200	-65/200	-65/200	-65/200	-65/200
Weight (lbs/ft)	.010	.015	.020	.040	.050

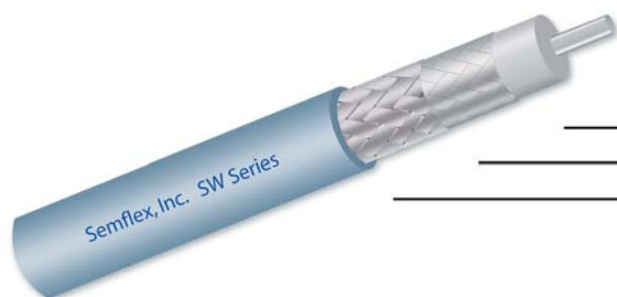
### Electrical Properties

Impedance (ohms)	50	50	50	50	50
Capacitance (pf/ft)	32	27	27	26.9	26.7
Inductance (nH/ft)	58	67	66	66	62
Shielding Effectiveness (dB)	>85	>85	>85	>85	>85
Cut Off Frequency (GHz)	129	71	55	40	28
Velocity of Propagation	72%	74%	76%	76%	77%
Breakdown Voltage (KV)	>1	>3	>5	>7	>10
Max Structural VSWR	1.15:1	1.15:1	1.15:1	1.15:1	1.15:1



## CABLE CONSTRUCTION

The SW Series uses silver plated inner and outer conductors for low attenuation. The microporous PTFE dielectrics and FEP jackets provide consistent performance over temperature extremes with better phase performance over temperature than solid PTFE dielectrics. The SW series construction is completed with two woven braids (97% coverage), offering shielding effectiveness >85dB.



- Silver Plated Copper \*
  - Low Density Microporous PTFE
  - Silver Plated Copper Flat Braid \*
  - Silver Plated Copper Round Braid \*
  - Extruded FEP Jacket - Blue Tint
- \* Silver Plating per ASTM-B-289



# Ease of Assembly

## Attenuation (dB/100 ft)

GHz	SW060	SW086	SW110	SW150	SW180
.5	27.31	16.31	11.72	8.97	6.29
1	38.73	23.25	16.75	12.79	9.02
2	54.99	33.25	24.03	18.29	12.98
6	96.15	59.19	43.13	32.56	23.48
12	137.24	85.92	63.09	47.27	34.58
18	169.27	107.31	79.23	59.03	43.64
*k1	<b>38.375</b>	<b>22.621</b>	<b>16.151</b>	<b>12.446</b>	<b>8.624</b>
*k2	<b>.359</b>	<b>.630</b>	<b>.595</b>	<b>.346</b>	<b>.392</b>

Guaranteed Max

For RF and MW applications requiring interconnects for:

- Racks, cabinets or enclosures
- Miniature flex cable diameters
- Broad temperature extremes
- Tight bends

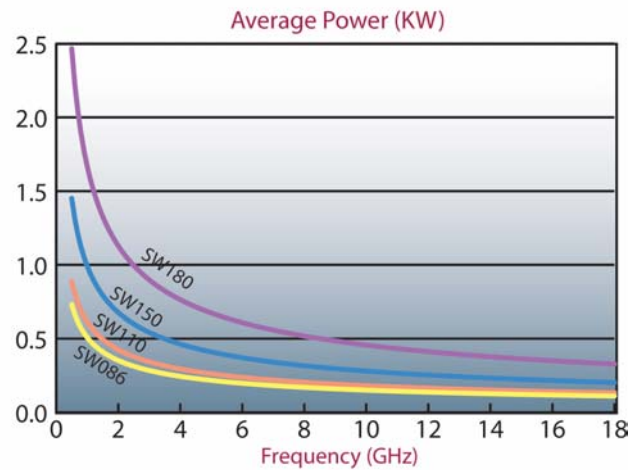
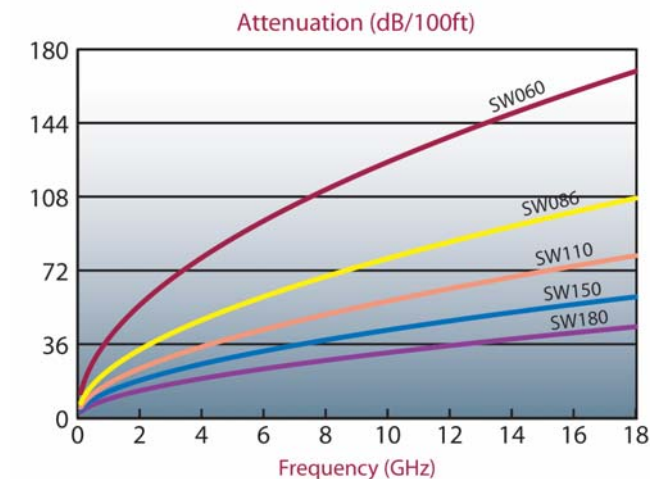
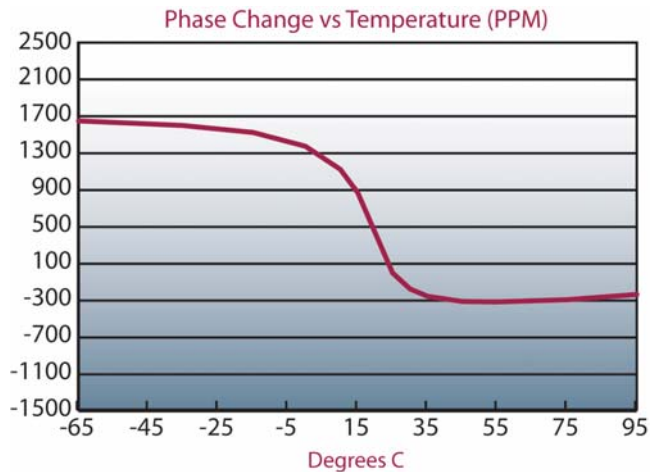
## Average Power (KW)

GHz	SW060	SW086	SW110	SW150	SW180
.5	-	0.73	0.89	1.45	2.47
1	-	0.52	0.63	1.02	1.73
2	-	0.36	0.43	0.70	1.18
6	-	0.20	0.24	0.38	0.62
12	-	0.13	0.16	0.25	0.40
18	-	0.11	0.13	0.19	0.31

Power Rating

## Cable Cross Reference

Semflex	Replacement
SW060	RG178, .047 Semi-rigid
SW086	RG316, .086 Semi-rigid
SW150	RG142, .141 Semi-rigid
SW180	LL142 (Double Shield)



\* Attenuation at any frequency  
 $= (k1 \times \sqrt{\text{freq}(\text{GHz})}) + (k2 \times \text{freq}(\text{GHz}))$

"The difference starts with the cable..."

