SW Cable Series

Emerson Network Power Connectivity Solutions offers the **Semflex** SW test cable assembly series. 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 overal costs. The SW060, SW086 and SW150 cable sizes can be assembled with standard semirigid or RG style crimp on connectors.

Applications

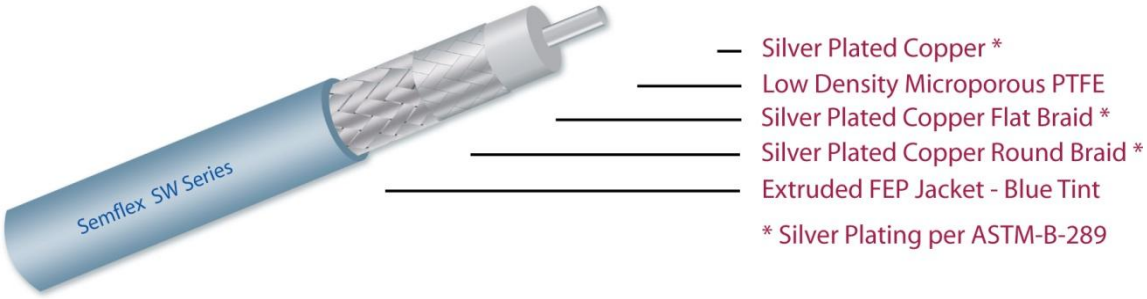
- RF and MW applications requiring interconnects for
- Racks, cabinets or enclosures
- Miniature flex cable diameters
- Broad temperature extremes
- Tight bends

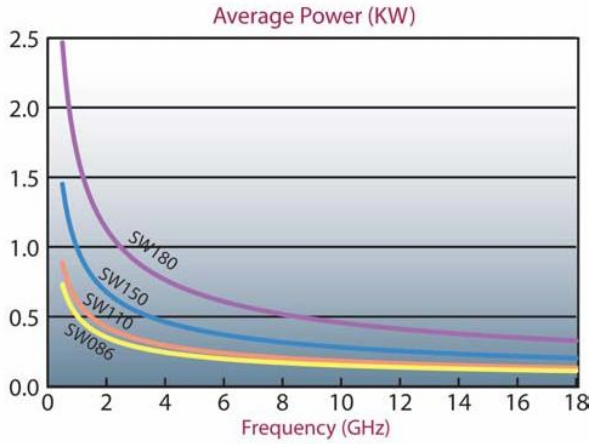
Cable Construction

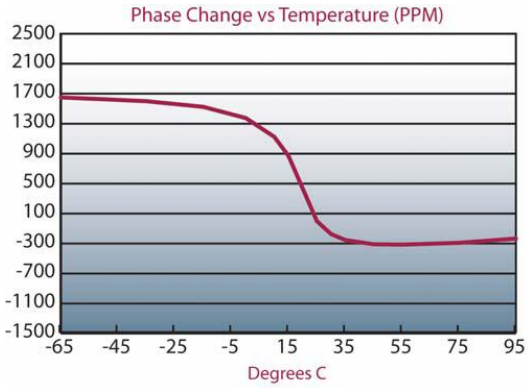
- The SW Series uses silver plated inner and outer conductors for low attenuation. The microporous PTFE dielectrics and FEP jackets provide consistent performance over temperature extremes with better phase performance over temperature than solid PTFE dielectrics. The SW series construction is completed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

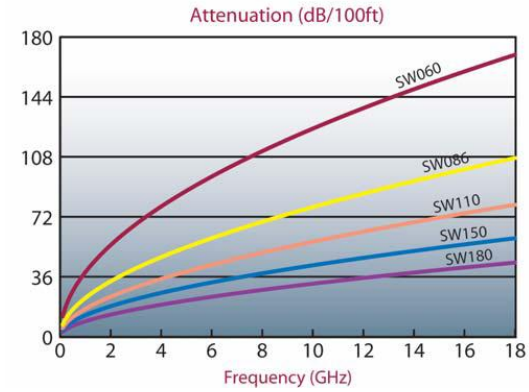
Cable Cross Reference

Semflex	Replacement
SW 060	RG 178, .047 Semi-rigid
SW 086	RG 316, .086 Semi-rigid
SW 150	RG 142, .141 Semi-rigid
SW 180	LL 142 (Double Shield)









** Attenuation at any frequency:

$$= \left(k1 \times \sqrt{freq(GHz)}\right) + \left(k2 \times freq(GHz)\right)$$

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Connectivity Solutions

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Additional Specifications

Electricals	SW 060	SW 086	SW110	SW 150	SW 180
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
Mechanical/ Environmental	**SW 060**	**SW 086**	**SW110**	**SW 150**	**SW 180**
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 Blend Radius (in)	.275	.4	.5	.8	1.0
Operating Temperature (^{0}C)	-65/200	-65/200	-65/200	-65/200	-65/200
Weights (lbs/ft)	.010	.015	.020	.040	.050
Attenuation (dB/100 ft) Guaranteed Max	**SW 060**	**SW 086**	**SW110**	**SW 150**	**SW 180**
.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	38.375	22.621	16.151	12.446	8.624
**k2	.359	.630	.595	.346	.392
Average Power (KW) Power Rating	**SW 060**	**SW 086**	**SW110**	**SW 150**	**SW 180**
.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

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