

KW Series Cable

The KW Series has the ultra low attenuation of rigid, corrugated, air dielectric cables, while offering higher power ratings and incredible flexibility. A copper clad aluminum conductor and soft pliable polyurethane jacket provide the flexibility needed to easily route cable in tight spaces such as cabinets and airframes where rigid cables require special tooling or simply do not fit. These features combine to reduce overall system integration costs by allowing designers to save space and installers to save time.



CABLE PROPERTIES

Mechanical Properties

	KW430	KW530	KW800
Jacket O.D. (in)	.430	.530	.800
Round Braid O.D. (in)	.343	.433	.697
Flat Braid O.D. (in)	.327	.417	.685
Dielectric O.D. (in)	.315	.405	.670
Center Conductor O.D. (in)	.114	.144	.245
Center Conductor Type	Solid	Solid	Solid
Inside Min Bend Radius (in)	2.2	2.5	4.0
Operating Temperature (°C)	-65/85	-65/85	-65/85
Weight (lbs/ft)	.15	.20	.30

Electrical Properties

Impedance (ohms)	50	50	50
Capacitance (pf/ft)	24	24	24
Inductance (nH/ft)	62	62	62
Shielding Effectiveness (dB)	>85	>85	>85
Cut Off Frequency (GHz)	14	11	6
Velocity of Propagation	83%	83%	85%
Breakdown Voltage (KV)	>17	>20	>25
Max Structural VSWR	1.20:1	1.20:1	1.20:1

Superior Flexibility

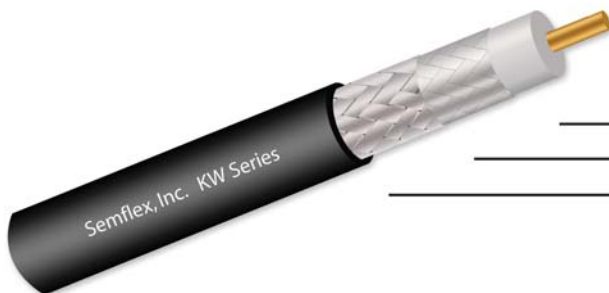


Compared to corrugated cables, the KW series offers much better flexibility. KW cables are easily hand formed and installed in spaces too tight for other high power or ultra low loss cables.



CABLE CONSTRUCTION

KW Series cable uses copper clad aluminum center conductors for increased flexibility. The microporous (expanded) PTFE dielectrics provide increased power handling. Silver plated flat and round braids combined provide >85 dB of shielding effectiveness and robust connector attachment. The soft and pliable polyurethane jacket is fire retardant and UV resistant, suitable for both indoor and outdoor applications.



- Copper Clad Aluminum
- Low Density Microporous PTFE
- Silver Plated Copper Flat Braid *
- Silver Plated Copper Round Braid *
- Extruded Black Polyurethane Jacket - Passes UL94 Vertical Flame Test Condition V-0
- * Silver Plating per ASTM-B-289

Attenuation (dB/100 ft)

GHz	Guaranteed Max	KW430	KW530	KW800
.45		2.78	2.23	1.40
1		4.26	3.44	2.21
3		7.85	6.43	4.29
6		11.75	9.73	6.71
10		16.00	13.39	-
14		19.74	-	-
*k1		3.894	3.079	1.845
*k2		.369	.365	.365

Average Power (KW)

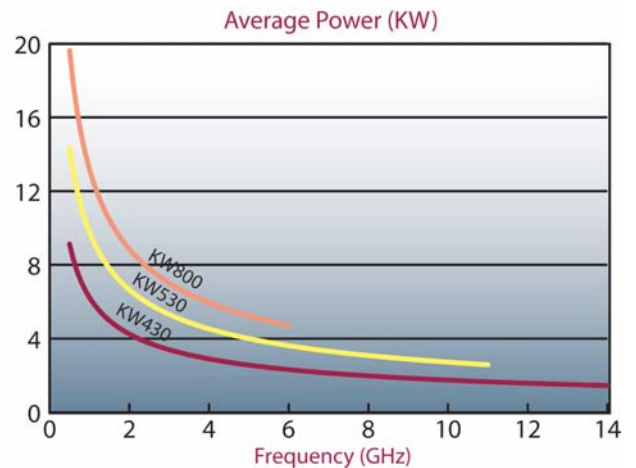
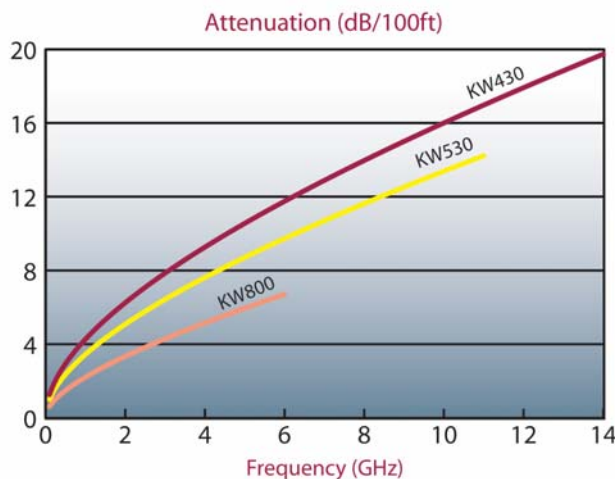
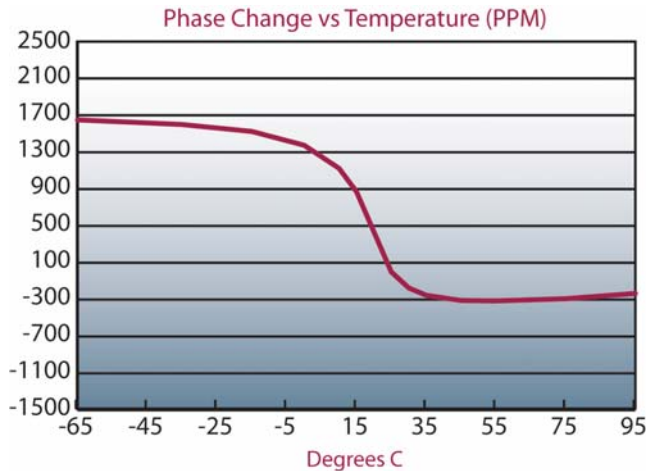
GHz	Power Rating	KW430	KW530	KW800
.45		9.8	15.4	21.3
1		6.4	10.0	13.5
3		3.5	5.4	7.0
6		2.3	3.6	4.5
10		1.7	2.6	-
14		1.4	-	-

For applications up to 14 GHz requiring:

- Improved flexibility over corrugated
- Tight installation spaces
- Ultra low loss
- High power

Cable Cross Reference

Semflex	Replacement
KW430	FSJ2-50, ETS2-50, EFX2-50, LDF2-50
KW530	FSJ4-50, LDF4-50
KW800	LDF5-50



* Attenuation at any frequency

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



"The difference starts with the cable..."