Technical Data

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Attenuation Chart

Nom. Attenuation. Frequency in Mhz db/100ft									
Cable Type	10Mhz	30Mhz	50Mhz	150Mhz	220Mhz	450Mhz	900Mhz	1.2Ghz	2.4Ghz
100 Series	2.3	3.9	5.1	8.9	10.9	15.8	22.8	26.7	38.9
195 Series	1.1	2.0	2.5	4.4	5.4	7.8	11.1	12.9	18.6
240 Series	0.8	1.3	1.7	3.0	3.7	5.3	7.6	8.8	12.7
400 Series	0.4	0.7	0.9	1.5	1.9	2.7	3.9	4.5	6.6
600 Series	0.2	0.4	0.5	1.0	1.2	1.7	2.5	2.9	4.3
LMR-400-UF	0.5	0.8	1.1	1.8	2.2	3.3	4.7	5.5	7.9
RG142/U									
RG213/U	0.6	1.2	1.5	2.8	x	5.2	7.3	x	x
RG214/U	0.6	0.9	1.3	2.3	x	4.5	7.3	x	x
RG223/U	1.2	2.0	2.8	5.0	x	9.8	13.4	x	x
RG316/U									
RG393/U									
RG58A/U	1.5	2.6	3.3	6.8	x	12.6	21.0	x	x
RG8/U (CXP1318FX)	0.5	0.8	1.1	1.8	2.2	3.3	4.7	5.5	7.9
RG8X-Mini	1.0	2.0	2.3	4.7	x	8.6	13.0	x	x

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The Importance of Replacing your Coax Cable

The life of a coaxial cable depends on many factors. Some of those factors are ultra-violet exposure, migration, high humidity, age, corrosion, power/heat, and voltage. Here are some important guidelines to remember when you start considering the replacement of your coaxial cable run(s).

1. **Ultra-Violet** exposure breaks down the plasticizers of the jacket over time. As a guideline: Type IIa (2a) non-contaminating PVC jackets can last twice as long as type Ia (1a) PVC jacket.
2. **Migration & Corrosion** affects the attenuation stability over time by contamination of the dielectric due to jacket plasticizers, and moisture penetration through the jacket.
3. **Power** electrical losses result from the generation of heat in the center conductor; braid shield, and the dielectric. The power handling capability of a cable is related to its ability to effectively dissipate this heat. Please be aware that a solid or semi-solid polyethylene dielectric dissipates heat better than a foam polyethylene dielectric, since most of the heat is generated in the center conductor. On balance, the power handling capability of a coaxial cable is inversely proportional to its attenuation, and to its size. This is why RG213/U (CABLE X-PERTS # 18267) handles higher power more efficiently than for example RG58/U (CABLE X-PERTS # 18240). Another factor is the thermal conductive (or heat transfer) properties of the cable, especially within the dielectric. In other words, high ambient temperature, and high altitude could reduce the power rating by impeding the heat transfer out of the cable. High VSWR also reduces the power ratings due to localized **HOT SPOTS** at poor connector terminations and/or other improper usage.
4. **Operating Voltage is represented by two separate voltage ratings.**
    a. **Corona** is a related ionization phenomenon that causes noise generation, which leads to long term dielectric damage, and eventual breakdown of the cable. Note: High wattage amplifiers can cause premature dielectric deterioration and larger Corona affects.
    b. **Dielectric Withstanding Voltage** a voltage level that abruptly breaks down the dielectric. To ensure the dielectric integrity of CABLE X-PERTS cables and assemblies, they are HI-POT™ tested during manufacturing and in our ready-made cable assembly department.

In summation, coaxial cable can perform to it's maximum designed efficiency an average of seven years to ten years, provided the connectors are appropriately terminated and the cable is installed correctly. So if your **signal is fading** or you're getting erratic VSWR readings, or are unable to get the maximum performance from your transceiver, then its time to consider changing your coaxial cable or cable assemblies. To help choose the correct cable for your application, use our handy Cable Calculatorand visit our Ready-Made assembly product page. Otherwise, simply contact our sales department for additional help in making your cabling choices.

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Abbreviation Chart

CENTER CONDUCTORS TYPES		DIELECTRIC TYPES	
BC	Bare Copper	**SSPE**	Semi-Solid Polyethylene 84% V/P
TC	Tinned Copper	**CCFP**	Closed-Cell Foam Polyethylene 84% V/P
STRD	Stranded	**LDF**	Low-Density Foam Polyethylene 88% V/P
SOL	Solid	**SPE**	Solid Polyethylene 66% V/P
SPC	Silver Plated Copper	**FPE**	FoamPolyethylene 78% V/P
CCA	Copper Covered Aluminum	**STFE**	Solid Teflon 69.4% V/P
CCS	Copper Covered Steel	**V/P**	Velocity of Propagation
CW	Copperweld (Copper Covered Steel)		
SCCS	Silver Covered Copper Steel.		
SHIELD TYPES		**JACKET TYPES**	
100%F+95	100% Aluminum Bonded Foil +95% Tinned Copper Braid	**IA**	Ultra-Viotlet Resistant PVC
COR-COP	Corrugated Copper	**IIA**	UVR-DB Non-Contaminating PVC Direct Burial
95%+BC	Minimum 95% Bare Copper	**IIIA**	Ultra-Violet Resistant Polyethylene
2/95%SC	Two 95% Coverage Minimum Silver Plated Copper	**FEP**	Teflon

		TPE	Thermo-Plastic Elastomer
		BLK UVR	Black Ultra-Violet Resistant
		UVR-DB	Ultra-Violet Resistant Direct Burial

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