PIC RF MATES®

PRODUCT BULLETIN

PIC S33141

LOW LOSS 50 OHM COAXIAL CABLE

CABLE CONSTRUCTION

1. Fluoropolymer Jacket (Clear)
2. Silver-Plated Copper Shield
3. Aluminum / Polyimide Shield
4. Silver-Plated Copper Flat Strip Braid
5. PTFE Dielectric
6. Silver-Plated Copper Conductor

This cable is particularly suitable for GPS, TCAS, Mode-S, MLS and SATCOM installations. It is lower loss, more flexible and less than half the weight of RG214 and less than one third the weight of RG393.

This special coaxial design incorporates a multi-layered shielding technique that combines conventional shields with an inner shield woven of flat strips of silver plated copper. This "unitized" shield reduces attenuation at frequencies over 1 GHz when compared to round wire braids in standard coaxial cables. Additionally, the cable VSWR is lower because the braids can be applied more uniformly. The attenuation and VSWR variation due to aging and flexure is substantially less.

It is Skydrol resistant, RoHS compliant and meets the FAA flammability requirements of FAR Part 23 and 25, Appendix F; complies with MIL-C-17 as applicable.

Note: This product is also available with an orange fluoropolymer jacket under product number S34141.

PHYSICAL DATA

Conductor	14 AWG Stranded SPC
Operating Temperature	-55° to +200°C
Outer Diameter: in (mm)	0.27 (6.86)
Minimum Bend Radius: in (mm)	1.40 (35.56)
Weight: lbs/100 ft (kg/100 m)	6.5 (9.7)

ELECTRICAL DATA

Impedance: ohms		50
Capacitance: pF/ft (m)		25.0 (82.0)
Velocity of Propagation: %		80.5
Time Delay: ns/ft (m)		1.26 (4.13)
RF Shielding Effectiveness: dB/min		-90
DC Resistance: ohms/1000 ft (m)		2.9 (9.5)
Attenuation: Nom / Max	dB/100 ft	(dB/100 m)
@400 MHz	4.2 / 4.7	(13.8 / 14.4)
@1.0 GHz	6.7 / 7.4	(22.0 / 24.3)
@1.6 GHz	8.6 / 9.5	(28.2 / 31.2)
@5.0 GHz	15.5 / 17.1	(50.9 / 56.1)
K Values (nom loss):	K1 = 0.207, K2 = 0.0001785	
Formula for Attenuation:	$(K1 * \sqrt{F(MHz)}) + (K2 * F(MHz)$	

All values nominal unless otherwise noted