

### 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. SPCCS Center Conductor



This cable is particularly suitable for GPS, TCAS, MLS, Mode S and SATCOM installations. It is dimensionally identical to RG142, but has lower loss and improved shielding.

This special coaxial design incorporates a multi-layered shielding technique that combines conventional shields with an inner braid 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.

S44193 can be terminated with standard RG142/RG400 connectors.

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.

### PHYSICAL DATA

- Conductor 19 AWG Solid SPCCS
- Operating Temperature -55° to +200°C
- Outer Diameter: in (mm) 0.20 (4.95)
- Minimum Bend Radius: in (mm) 1.00 (25.40)
- Weight: lbs/100 ft (kg/100 m) 4.3 (6.4)

### ELECTRICAL DATA

- Impedance: ohms 50
- Capacitance: pF/ft (m) 29.3 (96.1)
- Velocity of Propagation: % 69.5
- Time Delay: ns/ft (m) 1.46 (4.79)
- RF Shielding Effectiveness: dB/min -90
- DC Resistance: ohms/1000 ft (m) 19.1 (62.7)
- Attenuation: Nom / Max dB/100 ft (dB/100 m)
  - @400 MHz 6.8 / 7.5 (22.3 / 24.6)
  - @1.0 GHz 11.1 / 12.2 (36.4 / 40.0)
  - @1.6 GHz 14.3 / 15.7 (46.9 / 51.5)
  - @5.0 GHz 26.8 / 29.5 (87.9 / 96.8)
- K Values (nom loss): K1 = 0.3265, K2 = 0.00075
- Formula for Attenuation:  $(K1 * \sqrt{F(MHz)}) + (K2 * F(MHz))$

*All values nominal unless otherwise noted*

**PIC P/N**                      **CONNECTOR TYPE**

**ARINC**

<b>190119</b>	<b>404 Size 1</b>
<b>190101</b>	<b>600 Size 1</b>
<b>190102</b>	<b>600 Modified Size 1</b>
<b>110123</b>	<b>404/600 Size 5</b>

**M39012**

<b>PIC P/N</b>	<b>CONNECTOR TYPE</b>	<b>PIC P/N</b>	<b>CONNECTOR TYPE</b>
<b>190112</b>	<b>BNC Straight Plug</b>	<b>110576</b>	<b>QMA Straight Plug</b>
<b>190113</b>	<b>BNC 90° Plug</b>	<b>110577</b>	<b>QMA 90° Plug</b>
<b>190127</b>	<b>BNC Inline Jack</b>	<b>110198</b>	<b>SMA Straight Plug</b>
<b>110193</b>	<b>BNC Bulkhead Jack</b>	<b>110207</b>	<b>SMA 90° Plug</b>
<b>190106</b>	<b>C Straight Plug</b>	<b>190125</b>	<b>SMA Inline Jack</b>
<b>190107</b>	<b>C 90° Plug</b>	<b>190108</b>	<b>TNC Straight Plug</b>
<b>190104</b>	<b>HN Straight Plug</b>	<b>190109</b>	<b>TNC 90° Plug</b>
<b>190105</b>	<b>HN 90° Plug</b>	<b>190131</b>	<b>TNC 75° Plug</b>
<b>190110</b>	<b>N Straight Plug</b>	<b>190123</b>	<b>TNC Inline Jack</b>
<b>190111</b>	<b>N 90° Plug</b>	<b>190121</b>	<b>TNC Bulkhead Jack</b>
<b>190124</b>	<b>N Inline Jack</b>		
<b>110087</b>	<b>N Bulkhead Jack</b>		

*Also fit PIC S44191, RG142 and RG400*

*Die Sets Available On Loan Or For Purchase From PIC  
Refer To Connector Drawing For Tooling  
**Call PIC For Availability***