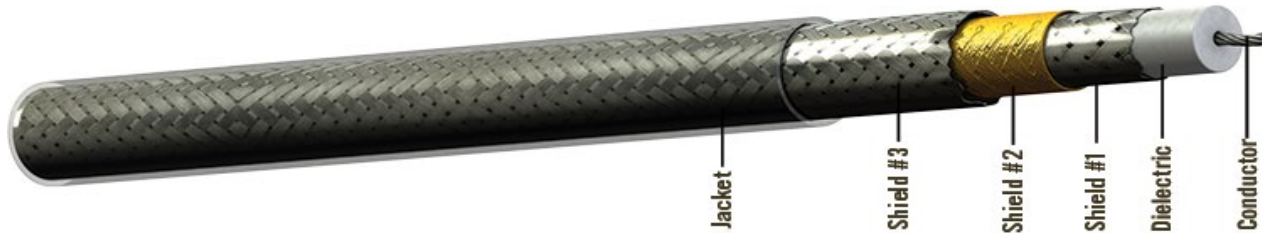


# S44191



## CABLE CONSTRUCTION

**Conductor:** Silver-Plated Copper

**Dielectric:** PTFE

**Shield #1:** Silver-Plated Copper Flat Strip Braid

**Shield #2:** Aluminum/Polyimide Foil

**Shield #3:** Silver-Plated Copper Braid

**Jacket:** Extruded FEP, Clear

S44191 is a 50 Ohm coaxial cable and the industry's workhorse, with decades of proven performance in the aerospace and defense markets. S44191 is equivalent in size as the standard Mil-Spec RG400 coax cable but offers lower loss and improved shielding due to its construction. The construction of the S44191 features a multi-layered shielding that combines conventional shields with an inner braid woven of flat strip of silver plated copper which reduces attenuation at frequencies over 1GHz when compared to round wire braids in standard coaxial cable. 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.

## PHYSICAL DATA

<b>Conductor:</b>	20 AWG Stranded SPC
<b>Temperature Range:</b>	-55 to +200°C
<b>Outer Diameter:</b> in (mm)	0.195 (4.95)
<b>Minimum Bend Radius:</b> in (mm)	1 (25.4)
<b>Weight:</b> lbs/100 ft (kg/100 m)	4.3 (6.4)

## ENVIRONMENTAL DATA

<b>Skydrol Resistant:</b>	SAE AS4373E, Method 601
<b>RoHS Compliant:</b>	RoHS Directive 2002/95/EC)
<b>Flame / Smoke Requirements:</b>	FAR Part 25.869 (a) App. F, Part 1, (a)(3)
<b>Berry Specialty Metals Compliance:</b>	DFARS 252.225-7014, Alt 1

## ELECTRICAL DATA

<b>Impedance:</b>	50 ohms
<b>Capacitance:</b> pF/ft (m)	29.3 (96.1)
<b>Velocity of Propagation:</b>	69.5%
<b>Time Delay:</b> ns/ft (m)	1.46 (4.79)
<b>Shielding Effectiveness:</b> dB/min	-90
<b>DC Resistance:</b> ohms/1000 ft (m)	8.6 (28.2)

## ATTENUATION DATA

Frequency	Nom / Max dB/100 ft	Nom / Max (dB/100 m)
@0.4 GHz	7.3/8.0	(24.0/26.2)
@1.0 GHz	11.8/13.0	(38.7/42.7)
@1.6 GHz	15.2/16.8	(49.9/55.1)
@5.0 GHz	28.5/31.4	(93.5/103.0)

**Formula for Attenuation:**  
 $(K1 \times \sqrt{F(\text{MHz})}) + (K2 \times F(\text{MHz}))$

**K Values (nom loss):**  
 K1 = 0.35    K2 = 0.00075

*All values nominal, unless otherwise noted*

**S44191 50 OHM COAXIAL CABLE**

# CONTACTS/CONNECTORS FOR S44191

## ARINC CONTACTS

PART #	CONTACT TYPE
190119	404 Size 1 Socket
190101	600 Size 1 Socket
190102	600 Modified Size 1 Socket
110123	404/600 Size 5 Socket

## M39012 CONNECTORS

PART #	CONNECTOR TYPE
190112	BNC Straight Plug
190113	BNC 90° Plug
190127	BNC Inline Jack
111202	BNC Bulkhead Jack
190106	C Straight Plug
190107	C 90° Plug
190104	HN Straight Plug
190105	HN 90° Plug
190110	N Straight Plug
190111	N 90° Plug
110087	N Bulkhead Jack
110576	QMA Straight Plug
110577	QMA 90° Plug
110198	SMA Straight Plug
110207	SMA 90° Plug
190108	TNC Straight Plug
190109	TNC 90° Plug
190131	TNC 75° Plug
190123	TNC Inline Jack
190121	TNC Bulkhead Jack