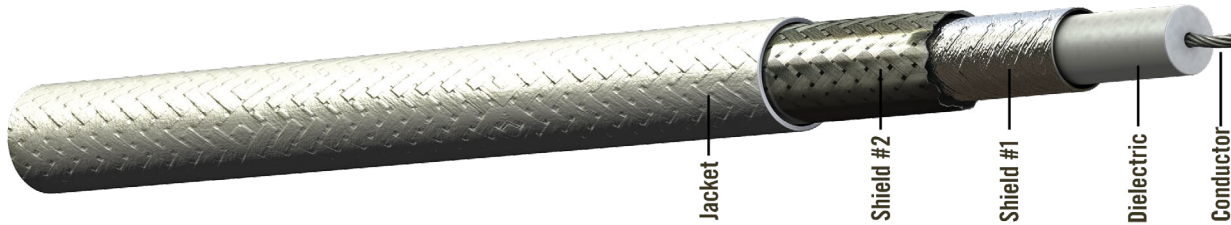


# V78209



## CABLE CONSTRUCTION

**Conductor:** Silver-Plated Copper

**Dielectric:** FEP

**Shield #1:** Aluminum/Polyimide Composite

**Shield #2:** Tin-Plated Copper Braid

**Jacket:** Extruded ETFE, White (Laser Markable)

The V78209 75 ohm coaxial cable offers low VSWR and attenuation characteristics for high-definition digital video. The construction of V78209 includes a silver-plated copper center conductor, a foamed fluoropolymer dielectric and it is double-shielded with a braid of tin-plated copper and an aluminized 100% coverage wrapper. Because of the critical effect of impedance-matched terminations, a comprehensive family of 75-ohm connectors are available.

## PHYSICAL DATA

<b>Conductor:</b>	20 AWG Stranded SPC
<b>Temperature Range:</b>	-55 to +150°C
<b>Outer Diameter:</b> in (mm)	0.211 (5.36)
<b>Minimum Bend Radius:</b> in (mm)	1.1 (27.9)
<b>Weight:</b> lbs/100 ft (kg/100 m)	3.15 (4.7)

## 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

## RECOMMENDED MAX TRANSMISSION LENGTHS

<b>SMPTE 292M (HD-SDI):</b> f (m)	210 (64)
<b>SMPTE 424M (3G-SDI):</b> f (m)	140 (43)

(Max length based on 20 dB max. Contact system OEM to verify max loss allowed)

## ELECTRICAL DATA

<b>Impedance:</b>	75 ohms
<b>Capacitance:</b> pF/ft (m)	16.5 (54.1)
<b>Velocity of Propagation:</b>	80%
<b>Time Delay:</b> ns/ft (m)	1.27 (4.17)
<b>Shielding Effectiveness:</b> dB/min	-90
<b>DC Resistance:</b> ohms/1000 ft (m)	9.2 (30.2)

## ATTENUATION DATA

Frequency	Nom / Max dB/100 ft	Nom / Max (dB/100 m)
@ 0.4 GHz	6.1/6.7	(20.0/22.0)
@ 0.75 GHz	8.6/9.4	(28.2/30.8)
@ 1.5 GHz	12.7/14.0	(41.7/45.9)
@ 3.0 GHz	19.0/21.0	(62.3/68.9)

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

**K Values (nom loss):**

K1 = 0.282    K2 = 0.0012

*All values nominal, unless otherwise noted*

**V78209 75 OHM COAX CABLE**

# CONTACTS/CONNECTORS FOR V78209

## ARINC CONTACTS

PART #	CONTACT TYPE
190937	Size 8 Pin (75Ω)
190932	Size 8 Socket (75Ω)

## M39012 CONNECTORS

PART #	CONNECTOR TYPE
190912	BNC Straight Plug
110718	HD-BNC Straight Plug
190913	BNC 90° Plug
190945	BNC Mini Straight Plug
190946	BNC Mini 90° Plug
190928	BNC Bulkhead Jack
190944	SMC 75 ohm Female Plug
190908	TNC Straight Plug
190909	TNC 90° Plug
190921	TNC Bulkhead Jack

## M39029 FOR MIL-C-38999 CONTACTS

PART #	CONTACT TYPE
190940	Size 8 Pin (75Ω)
190940-01	Size 8 Pin (75Ω) (w/ Environmental Seal)
190941	Size 8 Socket (75Ω)
190941-01	Size 8 Socket (75Ω) (w/ Environmental Seal)

## DIN CONNECTOR

PART #	CONNECTOR TYPE
110844	1.0/2.3 DIN Plug