

CABLE CONSTRUCTION

1. ETFE Jacket (White) Laser Markable
2. Tin-Plated Copper
3. Aluminized Wrapper
4. Foamed FEP Dielectric
5. Stranded Silver-Plated Copper



This coaxial cable has been designed for 75 ohm applications such as high-definition digital or baseband analog video. This cable is ideally suited for both SMPTE 292M (HD-SDI) and SMPTE 424M (3G-SDI) applications because of its low VSWR & attenuation characteristics. Refer to the statement below for the maximum recommended transmission lengths for this cable.

The construction of V78209 includes a silver-plated copper center conductor, a foamed FEP dielectric and it is double-shielded with a braid of tin-plated copper and an aluminized 100%-coverage wrapper. Tefzel jacketing protects the cable against abrasion and environmental effects while maintaining flexibility for ease of installation. It is laser-markable.

V78209 is Skydrol resistant, RoHS compliant and meets the FAA flammability requirements of FAR Part 23 and 25, Appendix F. V78209 complies with MIL-DTL-17 as applicable.

Because of the critical effect of impedance-matched terminations, a comprehensive family of 75 ohm connectors is available. Please contact PIC Wire & Cable for more details.

RECOMMENDED MAX TRANSMISSION LENGTHS:

- SMPTE 292M (HD-SDI): 210'
- SMPTE 424M (3G-SDI): 140'

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

PHYSICAL DATA

• Conductor	20 AWG Stranded SPC
• Operating Temperature	-55° to +150°C
• Outer Diameter: in (mm)	0.21 (5.36)
• Minimum Bend Radius: in (mm)	1.10 (27.94)
• Weight: lbs/100 ft (kg/100 m)	3.2 (4.7)

ELECTRICAL DATA

• Impedance: ohms	75	
• Capacitance: pF/ft (m)	16.5 (54.1)	
• Velocity of Propagation: %	80.0	
• Time Delay: ns/ft (m)	1.27 (4.17)	
• RF Shielding Effectiveness: dB/min	-90	
• DC Resistance: ohms/1000 ft (m)	8.7 (28.4)	
• Attenuation: Nom / Max	dB/100 ft	(dB/100 m)
• @400 MHz	6.1 / 6.7	(20.0 / 22.0)
• @750 MHz	8.6 / 9.5	(28.2 / 31.2)
• @1.50 GHz	12.7 / 14.0	(41.7 / 45.9)
• @3.00 GHz	19.0 / 20.1	(62.3 / 65.9)
• K Values (nom loss):	K1 = 0.282, K2 = 0.0012	
• Formula for Attenuation:	$(K1 * \sqrt{F(MHz)}) + (K2 * F(MHz))$	

All values nominal unless otherwise noted

PIC P/N **CONNECTOR TYPE**

ARINC

190937	Size 8 Pin 75 ohm
190932	Size 8 Socket 75 ohm

M39029 for MIL-C-38999 Connector

PIC P/N **CONNECTOR TYPE**

190940	Size 8 Pin 75 ohm
190940-01	Size 8 Pin 75 ohm with seal
190941	Size 8 Socket 75 ohm
190941-01	Size 8 Socket 75 ohm with seal

M39012

PIC P/N	CONNECTOR TYPE	PIC P/N	CONNECTOR TYPE
190912	BNC Straight Plug	190944	SMC 75 ohm Female Plug
110718	BNC HD Straight Plug	190908	TNC Straight Plug
190913	BNC 90° Plug	190909	TNC 90° Plug
190945	BNC Mini Straight Plug	190921	TNC Bulkhead Jack
190946	BNC Mini 90° Plug		
190928	BNC Bulkhead Jack		

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