PIC VideoMATES®

PRODUCT BULLETIN

# PIC V75268

## 75 OHM COAXIAL CABLE

## CABLE CONSTRUCTION

1. FEP Jacket (Red)
2. Tin-Plated Copper
3. Foamed FEP Dielectric
4. Silver-Plated Copper


This coaxial cable has been designed for 75 ohm applications such as cabin entertainment analog and digital video. Compared with M17/94-RG179, this cable is substantially stronger (more than twice the tensile strength) and has better attenuation characteristics.

At the heart of V75268 is a silver-plated copper center conductor nearly 60% larger than in RG179 — yet the overall diameter of the cable increases by only 22%. To achieve the correct impedance in this proportionately-smaller diameter, a foamed FEP dielectric having a high velocity of propagation is employed to surround the center conductor. The cable is 95% (minimum) shielded with a braid of tin-plated copper. A distinctive red FEP jacket protects the cable against abrasion and environmental effects while maintaining flexibility for ease of installation.

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.

Because of the critical effect of impedance-matched terminations, a comprehensive family of 75 ohm connectors is available.

### RECOMMENDED MAX TRANSMISSION LENGTHS:

- SMPTE 259M (SD-SDI Component): 461'
- SMPTE 259M (SD-SDI Widescreen): 394'

*(Max length based on 30 dB max. Contact system OEM to verify max loss allowed)*

## PHYSICAL DATA

| | |
|---|---|
| • Conductor | 26 AWG Stranded SPC |
| • Tensile Strength: lbs (kg) Approx. | 25 (11.3) |
| • Operating Temperature | -55° to +150°C |
| • Outer Diameter: in (mm) | 0.12 (3.10) |
| • Minimum Bend Radius: in (mm) | 0.60 (15.24) |
| • Weight: lbs/100 ft (kg/100 m) | 1.3 (1.9) |

## ELECTRICAL DATA

| | | |
|---|---|---|
| • Impedance: ohms | | 75 |
| • Capacitance: pF/ft (m) | | 16.0 (52.5) |
| • Velocity of Propagation: % | | 80.0 |
| • Time Delay: ns/ft (m) | | 1.27 (4.17) |
| • RF Shielding Effectiveness: dB/min | | -50 |
| • DC Resistance: ohms/1000 ft (m) | | 34.5 (113.2) |
| • Attenuation: Nom / Max | dB/100 ft | (dB/100 m) |
| • @135 MHz | 5.9 / 6.5 | (19.4 / 21.3) |
| • @180 MHz | 6.9 / 7.6 | (22.6 / 24.9) |
| • @270 MHz | 8.6 / 9.5 | (28.2 / 31.2) |
| • @360 MHz | 10.1 / 11.1 | (33.1 / 36.4) |
| • K Values (nom loss): | | K1 = 0.478, K2 = 0.0029 |
| • Formula for Attenuation: | | $(K1 * \sqrt{F(MHz)} + (K2 * F(MHz)$ |

*All values nominal unless otherwise noted*

PIC WIRE & CABLE
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## CONNECTORS

## ARINC

| PIC P/N | CONNECTOR TYPE | PIC P/N | CONNECTOR TYPE |
|---|---|---|---|
| 190703 | Size 5 Socket 50 ohm | 190730 | Size 16 Socket |
| 190733 | Size 5 Socket 75 ohm | 110237 | Mil-C-81659 Size 9 Socket |
| 190729 | Size 8 Socket 50 ohm | | |
| 190732 | Size 8 Socket 75 ohm | | |

## D-SUB

| PIC P/N | CONNECTOR TYPE | PIC P/N | CONNECTOR TYPE |
|---|---|---|---|
| 110235 | Size 8 Pin 50 ohm | 110236 | Size 8 Socket 50 ohm |
| 190763 | Size 8 Pin 75 ohm | 190764 | Size 8 Socket 75 ohm |

## M39029 for MIL-C-38999 Connector

| PIC P/N | CONNECTOR TYPE | PIC P/N | CONNECTOR TYPE |
|---|---|---|---|
| 190738 | Size 8 Pin 50 ohm | 190739 | Size 8 Socket 50 ohm |
| 190738-01 | Size 8 Pin 50 ohm w/seal | 190741 | Size 8 Socket 75 ohm |
| 190740 | Size 8 Pin 75 ohm | 190741-01 | Size 8 Socket 75 ohm w/seal |
| 190740-01 | Size 8 Pin 75 ohm w/seal | 190767 | Size 12 Socket |
| 190766 | Size 12 Pin | 190734 | Size 16 Socket |
| 190735 | Size 16 Pin | | |

## M39012

| PIC P/N | CONNECTOR TYPE | PIC P/N | CONNECTOR TYPE |
|---|---|---|---|
| 190712 | BNC Straight Plug | 110218 | RCA Straight Plug |
| 110717 | BNC HD Straight Plug | | |
| 110249 | BNC 90° Plug | 190736 | SMB 75 ohm Socket |
| 190745 | BNC Mini Straight Plug | 110285 | SMC 75 ohm Female Plug |
| 110532 | BNC Mini 90° Plug | 190768 | SMC 75 ohm 90° Female Plug |
| 190727 | BNC Inline Jack | 190748 | SMZ 75 ohm Straight Plug |
| 190728 | BNC Bulkhead Jack | 190714 | SMA Straight Plug |
| 110677 | F Straight Plug | | |
| | | 190708 | TNC Straight Plug |
| | | 190721 | TNC Bulkhead Jack |

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