

RFS Red Plenum Coaxial Cables for Public Safety Applications

Best-In-Class UHF / VHF Plenum Coaxial Cables Enable Outstanding Electrical Performance for iDAS and oDAS Emergency Communications Applications



When it comes to public safety communications, reliable performance coupled with the ability to be quickly and easily visually associated with emergency systems is pivotal. Radio Frequency Systems (RFS) red public safety UHF / VHF plenum coaxial cables leverage the proven system performance of RFS' best-in-class plenum-rated wideband products while meeting the public safety industry's mission critical need for easily identifiable cable.

Due to their low attenuation, outstanding heat transfer properties, and temperature-stabilized dielectric materials, RFS' ClearFill®Line plenum-rated wideband cables offer a safe, long-term operating life at high-transmit power levels and provide the best VSWR performance in the industry. They feature low-flame-spread and low-smoke characteristics and meet the most stringent plenum cable standards, CMP, ETL listed to UL444, and also comply with Canadian CSA C.22.2/FT6 standard, making them ideal for use within the ceiling area defined as the "environ-

mental air handling space," as well as for more traditional plenum applications. Their solid outer conductor creates a continuous RFI/EMI shield that minimizes system interference.

EXCLUSIVE FEATURES

- **Plenum-rated – CMP, ETL listed to UL444**
 - Meets the most stringent industry standards for maximum safety
- **UV-rated cable**
 - Provides a fade resistant jacket
- **Outstanding electrical performance**
 - Best-in-class VSWR specification in the market improves coverage for less dropped calls
 - Best average power rating in the market provides high system efficiency
 - The solid outer conductor creates a continuous RFI / EMI shield that minimizes system interference
- **Continuous (star-shaped) dielectric for total inner conductor support**
 - Eliminates electrical or mechanical problems in tight bending areas; minimizes kinks
- **Wideband operation – up to 6 GHz**
 - Suitable for all in-building applications for maximum flexibility
 - Supports other major frequencies and technology bands

With 33 million feet of plenum-rated cable manufactured in the USA and deployed since 2011, the industry depends on RFS for trusted system performance!

ICA12-50JPLR Product Specifications

Size	1/2"
Maximum Return Loss, dB (VSWR)	18 (1.228:1) – in the specified bands
Impedance, Ohm	50 +/- 2
Maximum Frequency, GHz	6
Return Loss / VSWR @ 806-960 MHz	24.3 dB / 1.13
Return Loss / VSWR @ 1700-2155 MHz	24.3 dB / 1.13
Velocity, percent	91
Peak Power Rating, kW	21.4
Inner Conductor dc Resistance, ohm/1000 m (ohm/1000 ft)	1.48 (0.45)
Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft)	1.90 (0.58)
RF Peak Voltage, Volts	1500
Jacket Spark, Volt RMS	8000
Capacitance, pF/m (pF/ft)	76 (23.2)
Inductance, µH/m (µH/ft)	0.190 (0.058)
Outer Conductor Material	Annularly Corrugated Copper
Inner Conductor Material	Copper-Clad Aluminum Wire
Diameter over Jacket Nominal, mm (in)	15.93 (0.627)
Diameter Outer Conductor, mm (in)	13.8 (0.54)
Diameter Inner Conductor, mm (in)	4.8 (0.19)
Minimum Bending Radius, Single Bend, mm (in)	125 (5)
Minimum Bending Radius, Repeated Bends, mm (in)	254 (10)
Cable Weight, kg/m (lb/ft)	0.4 (0.27)
Tensile Strength, N (lb)	1112 (250)

RFS ClearFill® Line plenum-rated cables are tested in accordance with the U.S. National Fire Protection Agency (NFPA) testing method 262, ensuring they meet the most stringent flame-retardant and smoke-suppressant requirements.

In addition to its red plenum cables, RFS is now offering its popular CELLFLEX® Foam-Dielectric Coaxial Cable and RADIAFLEX® Radiating Cable for in-building and tunnel applications with a flame retardant, halogen-free red jacket. Additional alternative colors and customer-specific markings are also available on an individual basis dependent on quantity and application requirements.

All cables are manufactured in RFS' Meriden, CT headquarters, enabling RFS to accommodate specialized demands expediently and work with customers to provide cables which will fit in well with their surroundings when aesthetics matter, while providing uncompromising performance that they can depend on.

For more information, visit www.rfsworld.com



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RFS also offers its popular CELLFLEX® Foam-Dielectric Coaxial Cable and RADIAFLEX® Radiating Cable with a flame retardant, halogen free red jacket for in-building and in-tunnel public safety applications.

- Available in red for emergency communications applications.
- Designed with the public safety industry's mission critical need for easily identifiable cable in mind.