PRODUCT DATASHEET

ICA38-50JPL

3/8" Plenum-Rated Corrugated Coaxial Cable, 50 ohm, Up to 6GHz, Blue Color

Plenum-Rated 3/8" Air Dielectric Cable

RFS Technologies' 3/8" air dielectric cable is specifically engineered to meet stringent plenum requirements in both the United States and Canada, ensuring compliance with NEC and NFPA safety standards for use in air-handling spaces. Designed for exceptional RF performance and low loss, this cable is widely used in Distributed Antenna System (DAS) projects for in-building wireless communication, including commercial buildings, airports, hospitals, and other high-density venues. Its flexible construction allows for easy routing in tight plenum spaces, while its robust shielding ensures minimal signal interference. Ideal for applications requiring high signal integrity and regulatory compliance.

3/8" Plenum-Rated DAS Cable

FEATURES / BENEFITS

- **High-Frequency Performance up to 6 GHz**. Engineered to support RF signals across a broad frequency range—including up to 6 GHz—this cable meets the demands of today's advanced wireless communication systems, including 5G and future-ready networks.
- **Superior Shielding for Maximum Interference Protection**. The solid outer conductor provides complete 360° RFI/EMI shielding, significantly reducing signal leakage and minimizing system interference in high-density RF environments.
- **Exceptional Intermodulation Performance**. With both solid inner and outer conductors, the cable virtually eliminates passive intermodulation (PIM), ensuring clean signal transmission.
- **Optimized for Plenum-Space Installations**. Engineered to meet plenum-rated safety standards in the U.S. and Canada, this cable is ideal for indoor DAS applications in office buildings, hospitals, airports, and other public venues requiring strict fire safety compliance.

Technical features

APPLICATIONS

Applications		Wireless Communication	Mobile Radio	In Building	DAS

STRUCTURE

Size		3/8
Inner Conductor Diameter	mm (in)	3.1 (0.122)
Inner Conductor Material		Copper-Clad Aluminum Wire
Dielectric Diameter	mm (in)	7.5 (0.295)
Dielectric Material		Extruded Polyethylene
Outer Conductor Diameter	mm (in)	9.5 (0.374)
Outer Conductor Material		Corrugated Copper
Jacket Diameter	mm (in)	11.2 (0.441)
Jacket Material		PVC, Plenum Rated / Color Blue
Cable Type		Air-Dielectric, Corrugated

All values nominal unless tolerances provided; information contained in the present datasheet is subject to confirmation at time of ordering

TESTING AND ENVIRONMENTAL

Fire Performance		Flame Retardant, Plenum Rated
Flame Retardant Jacket Specifications		CMP (Communications Multipurpose Plenum)
Regulatory Compliance		NFPA 262 (UL910) / CATVP / CMP / UL444 / Canadian CSA C.22.2/FT6
Installation Temperature	°C(°F)	-20 to 60 (-4 to 140)
Storage Temperature	°C (°F)	-40 to 85 (-40 to 185)
Operation Temperature	°C(°F)	-40 to 85 (-40 to 185)

ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	6
Velocity	%	86
Capacitance	pF/m (pF/ft)	76 (23.2)
Peak Power Rating	kW	12.8
RF Peak Voltage	Volts	2500
Jacket Spark	Volt RMS	3000
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	3.95 (1.20)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	4.30 (1.31)
Return Loss (VSWR) Performance		24 (1.13) @ 698-960 MHz 24 (1.13) @ 1395-1432 MHz 24 (1.13) @ 1700-2155 MHz 20 (1.22) @ 2300-2700 MHz 18 (1.29) @ 3550-4200 MHz 18 (1.29) @ 5150-6000 MHz

MECHANICAL SPECIFICATIONS

Minimum Bending Radius, Single Bend	mm (in)	60 (2.36)
Minimum Bending Radius, Repeated Bends	mm (in)	110 (4.33)
Bending Moment	Nm (lb-ft)	1.9 (1.4)
Tensile Strength	N (lb)	260 (58.5)
Recommended / Maximum Clamp Spacing	m (ft)	0.5 / 0.9 (1.8 / 3)
Crush Strength	kg/mm (lb/ln)	1.53 (85.65)

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ATTENUATION @ 20°C (68°F) AND POWER RATING @ 40°C (104°F)

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
200	5.03	1.53	
450	7.66	2.33	
800	10.48	3.19	
900	11.12	3.39	
1500	14.92	4.55	
1800	16.56	5.05	
2000	17.58	5.36	
2200	18.40	5.61	
2500	19.96	6.08	
2700	20.92	6.38	
3000	22.11	6.74	
3400	23.83	7.26	
4000	26.05	7.94	
5000	29.81	9.09	
6000	32.80	10	

External Document Links
LINK TO VEX FILE

Notes

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