RFS Technologies
an Amphenol Company

SCF14-50JPL 1/4" SUPERFLEXIBLE PLENUM-RATED COAXIAL CABLES

ENGINEERED FOR TIGHT SPACES AND HIGH PERFORMANCE.

As a superior alternative to traditional braided cables, the SCF14-50JPL offers:

- Enhanced RF Shielding: Solid outer conductors provide complete protection against interference.
- Lower Signal Loss: Maximizes network efficiency for reliable connectivity.
- Better PIM Performance: Minimizes passive intermodulation for clear, uninterrupted communication.

OPTIMIZED FOR DAS JUMPER APPLICATIONS.

The SCF14-50JPL excels as a jumper cable in Distributed Antenna Systems (DAS), ensuring reliable connections between feeder cables, antennas, splitters, and radio equipment. Its compact, plenum-rated design meets the needs of modern indoor wireless networks.

PLENUM-RATED FOR SAFETY AND RELIABILITY

Engineered to meet the most rigorous safety standards, the SCF14-50JPL ensures secure operation in critical environments:

- Certified Safety Compliance: CMP, ETL, UL444, and CSA C.22.2/FT6 certifications guarantee low flame spread and smoke characteristics.
- Fire Safety Tested: Verified to NFPA 262 standards for flame retardance and smoke suppression.

KEY FEATURES FOR VERSATILITY AND PERFORMANCE

- Wideband Operation: Supports frequencies up to 20.4 GHz for Public Safety, Cellular, Wi-Fi, Paging, and 700MHz LTE.
- Durable Construction: Solid inner and outer conductors with continuous dielectric support eliminate intermodulation and mechanical failure.
- Flexible, Space-Saving Design: The 1-inch minimum bend radius simplifies installations in tight spaces.

A GAME-CHANGER FOR INDOOR WIRELESS NETWORKS

The SCF14-50JPL sets a new standard for performance, safety, and flexibility. Designed to simplify installations and deliver superior results, it is the ideal solution for DAS and other advanced indoor wireless systems.

FEATURES **/ BENEFITS**

- Plenum-rated – CMP, ETL listed to UL444 Meets the most stringent industry standards for maximum safety
- **Complete Shielding - The solid outer conductor creates a continuous RFI/EMI shield that minimizes system interference**
- Outstanding Electrical Performance - Best VSWR specification in the market improves coverage for less dropped calls
- Continuous foam dielectric for total inner conductor support - Eliminates electrical or mechanical problems in tight bending areas; minimizes kinks
- **Wideband Operation – Up to 20.4 GHz - Suitable for all in-building applications for maximum flexibility**
- Supports multiple frequencies and technologies. Ideal solution for LMR, Public Safety, Cellular, Paging, PCS/AWS, WiFi, WiMAX, WMTS and 700MHz LTE; Ideal for Plenum rated Jumpers
- Robust and Flexible Design: Built for tight bends without compromising durability.

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TECHNICAL FEATURES

Applications		Indoor	Wireless Communication	HF Defense	Microwave	Mobile Radio	Cable Solutions
STRUCTURE							
Jacket Color		Blue					
Inner Conductor Diameter	in (mm)	0.075 (1.9)					
Inner Conductor Material		Copper-Plated Aluminum Wire					
Dielectric Diameter	in (mm)	.017 (4.3)					
Dielectric Material		Foam Polyethylene					
Outer Conductor Diameter	in (mm)	0.26 (6.5)					
Outer Conductor Material		Corrugated Copper					
Jacket Diameter	in (mm)	0.31 (7.8)					
Jacket Material		PVDF, Plenum Rated / Water-resistant					
Cable Type		Plenum-Rated, Foam-Dielectric, Superflexible					
TESTING AND ENVIRONMENTAL							
Fire Performance		Flame Retardant, Plenum Rated					
Flame Retardant Jacket Specifications		ETL Listed to UL444, NEC 820-53 (a) CMP, NFPA-262, Canadian CSA C.22.2/ FT6, UL 910					
Installation Temperature	°F (°C)	-13 to 140 (-25 to 60)					
Storage Temperature	°F (°C)	-94 to 185 (-70 to 85)					
Operation Temperature	°F (°C)	-58 to 185 (-50 to 85)					
ELECTRICAL SPECIFICATIONS							
Impedance	Ω	50 +/- 1					
Maximum Frequency	GHz	20.4					
Velocity	%	81					
Capacitance	pF/ft (pF/m)	25 (82)					
Inductance	uH/ft (uH/m)	0.063 (0.207)					
Peak Power Rating	kW	5.5					
RF Peak Voltage	Volts	740					
Jacket Spark	Volt RMS	5000					
Inner Conductor dc Resistance	Ω/1000 ft (Ω/1000 m)	3.19 (10.5)					
Outer Conductor dc Resistance	Ω/1000 ft (Ω/1000 m)	2.74 (9)					
Return Loss (VSWR) Performance		20 (1.22) @ 450-617 MHz 24 (1.13) @ 617-960 MHz 24 (1.13) @ 1695-2200 MHz 20 (1.22) @ 2300-2700 MHz 18 (1.28) @ 3500-4200 MHz 16 (1.37) @ 5150-6000 MHz					
Phase Stabilized		Phase stabilized and phase matched cables and assemblies are available upon request.					
MECHANICAL SPECIFICATIONS							
Cable Weight, Nominal	lb/ft (kg/m)	0.05 (0.07)					
Minimum Bending Radius, Repeated Bends	in (mm)	1 (25)					
Bending Moment	lb (Nm)	0.5 (0.7)					
Tensile Strength	lb (N)	135 (600)					
Recommended / Maximum Clamp Spacing	ft (m)	0.67 / 0.67 (0.2 / 0.2)					

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

Frequency, MHz	dB per 100ft (dB per 100m)	Power, kW
150	2.19 (7.17)	0.92
174	2.36 (7.75)	0.85
200	2.54 (8.33)	0.79
300	3.13 (10.30)	0.64
400	3.65 (12)	0.55
450	3.88 (12.70)	0.52
500	4.10 (13.50)	0.49
512	4.15 (13.60)	0.49
600	4.52 (14.80)	0.45
700	4.91 (16.10)	0.41
800	5.27 (17.30)	0.38
824	5.35 (17.60)	0.38
894	5.59 (18.40)	0.36
900	5.61 (18.40)	0.36
925	5.70 (18.70)	0.35
960	5.81 (19.10)	0.35
1000	5.94 (19.50)	0.34
1250	6.71 (22)	0.30
1500	7.41 (24.30)	0.27
1700	7.94 (26.10)	0.25
1800	8.20 (26.90)	0.25
2000	8.69 (28.50)	0.23
2100	8.93 (29.30)	0.23
2200	9.20 (30.10)	0.22
2400	9.60 (31.60)	0.21
3000	10.90 (35.80)	0.19
3500	11.90 (39.10)	0.17
4000	12.90 (42.20)	0.16
5000	14.60 (48)	0.14
6000	16.30 (53.40)	0.12
7000	17.80 (58.60)	0.11
8000	19.30 (63.40)	0.10
9000	20.80 (68.10)	0.10
10000	22.10 (72.60)	0.09
12000	24.80 (81)	0.08

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CONNECTOR COMPATABILITY GUIDE

MODEL NUMBER	DESCRIPTION	INSTALLATION PREPARATION TOOLS
716M-SCF14-CP01	COMPRESSION 716M CONN	TRIM-S14-AFBXD05-32
43M-SCF14-CP01	COMPRESSION 43M CONN	TRIM-S14-AFBXD05-32
716M-SCF14-E01	CONN 716M SCF14-50 OR CN	TRIM-SET-L14-D01
NM-SCF14-D01	CONN NM SCF14-50 OP OR DK	TRIM-SET-L14-D01
NM-SCF14-E01	CONN NM SCF14-50 OP OR CN	TRIM-SET-L14-D01
NF-SCF14-D01	CONN NF SCF14-50 OP OR DK	TRIM-SET-L14-D01
NF-SCF14-E01	CONN NF SCF14-50 OP OR CN	TRIM-SET-L14-D01
43M-SCF14-E01	CONN 43M SCF14-50 OR CN	TRIM-SET-L14-D01
43MR-SCF14-E01	CONN 43M-RA SCF14-50 OR CN	TRIM-SET-L14-D01

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