industrial data rf cable series

LCF12-50J

1/2-Inch Low-Loss Foam-Dielectric RF Feeder Cable

50 Ω 1/2-inch annularly corrugated copper RF feeder cable with 88 % VoP foam PE



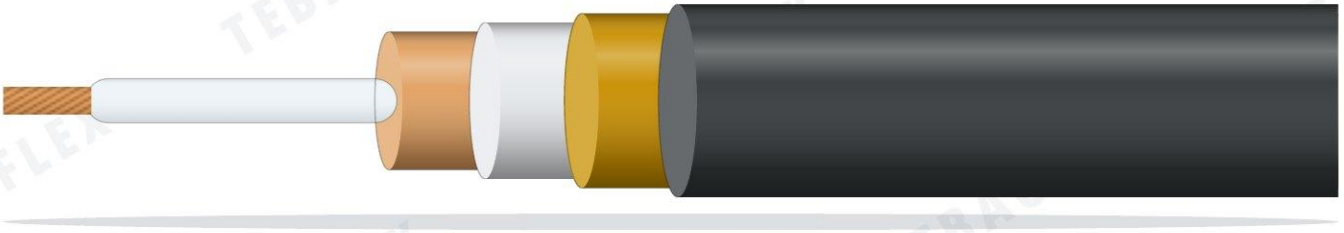
IEC 61196-7 · 1/2-Inch Feeder | 50 Ω · 88% VoP · ≤-160 dBc PIM | DC–8.8 GHz

Application

50 Ω 1/2-inch low-loss RF feeder cable (LCF12-50J) per IEC 61196-4 with a 4.8 mm copper-clad aluminum inner conductor, gas-injected foam PE dielectric (88 % VoP, 76 pF/m), annularly corrugated copper outer tube (> 120 dB RF shielding), and PE or LSZH jacket.

Typical uses: 4G LTE & 5G NR Base Station Towers, TETRA / P25 Public Safety Radio, In-Building DAS & Stadium Networks, Maritime Coastal Radar & VTS Masts, Broadcast Translator Links

Construction





Cross-section, not to scale

1. Copper-clad aluminum (CCA) inner conductor
2. Closed-cell physical foam PE dielectric
3. Annularly corrugated solid copper outer conductor
4. UV-stabilized polyethylene (J) or LSZH (B) jacket

Technical data

Typical values

Characteristic impedance	50 Ω ± 1 Ω	Velocity of propagation	88 % nominal (capacitance 76.0 pF/m)
Max. operating frequency	8.8 GHz (cutoff mode limit)	Attenuation @ 0.9 / 1.8 / 2.7 GHz	6.49 / 9.48 / 11.9 dB/100m
Passive intermodulation (PIM3)	≤ -160 dBc (2 × 43 dBm carriers)	Peak RF power / RF peak voltage	40.0 kW peak · 4.0 kV RMS
Operating temperature range	-55 °C to +85 °C	Installation temperature	-40 °C to +60 °C (PE) · -25 to +60 °C (LSZH)
Average power @ 900 / 1800 MHz	1.66 kW / 1.13 kW at +40 °C ambient	Inner / dielectric / outer Cu Ø	4.80 mm / 12.3 mm / 13.8 mm
Overall jacket diameter	15.8 mm ± 0.25 mm (1/2-inch nominal)	Min. bending radius	70 mm (single bend) · 125 mm (repeated)
Max. tensile pulling force	1,100 N	Screening attenuation	≥ 120 dB (solid corrugated copper tube)
UV & weather resistance	ISO 4892-2 carbon-black PE outdoor sheath	Water penetration	IEC 60529 IP68 with O-ring feeder connectors
Standards	IEC 61196-7 / EN 50289		

Sizes

8 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Impedance / size	Conductor & dielectric	Wall ≈ mm	Outer Ø ≈ mm	Metal kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard LCF12-50J configurations 8 sizes							
☐ LCF12-50J	1/2" · 50 Ω (PE)	CCA Ø 4.8 + Foam PE	1.00	15.80	118.0	210.0	70
☐ Low-Loss Foam-Dielectric RF Feeder LCF12-50B	1/2" · 50 Ω (LSZH)	CCA Ø 4.8 + Foam PE	1.05	15.90	118.0	235.0	70
☐ SCF12-50J Superflex	1/2" · 50 Ω Superflex	CCA Ø 3.6 + Foam PE	0.95	12.20	92.0	165.0	32
☐ LCF14-50J	1/4" · 50 Ω (PE)	CCA Ø 2.6 + Foam PE	0.80	7.60	48.0	82.0	35
☐ LCF38-50J	3/8" · 50 Ω (PE)	CCA Ø 3.1 + Foam PE	0.85	10.90	70.0	120.0	50
☐ LCF78-50J	7/8" · 50 Ω (PE)	Cu Tube Ø 9.3 + Foam PE	1.25	27.80	285.0	490.0	120
☐ LCF114-50J	1-1/4" · 50 Ω (PE)	Cu Tube Ø 13.1 + Foam PE	1.45	39.20	460.0	790.0	180
☐ LCF158-50J	1-5/8" · 50 Ω (PE)	Cu Tube Ø 17.6 + Foam PE	1.60	50.20	680.0	1,140.0	250

– Outer diameters and weights are nominal engineering values for LCF12-50J subject to standard manufacturing tolerances per IEC 61196-7 / EN 50289 (1/2-Inch Corrugated Copper Foam-PE RF Feeder).

RF & electrical data

8 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Char. Z0 Ω	Velocity VoP / L (% or nH/m)	Dielectric test V AC rms
LCF12-50J (1/2" · 50 Ω (PE))	1.48	50.0	88.0	4,000
Low-Loss Foam-Dielectric RF Feeder LCF12-50B (1/2" · 50 Ω (LSZH))	1.48	50.0	88.0	4,000
SCF12-50J Superflex (1/2" · 50 Ω Superflex)	2.65	50.0	82.0	3,000
LCF14-50J (1/4" · 50 Ω (PE))	5.10	50.0	84.0	2,200
LCF38-50J (3/8" · 50 Ω (PE))	3.40	50.0	86.0	2,800
LCF78-50J (7/8" · 50 Ω (PE))	0.92	50.0	89.0	6,000
LCF114-50J (1-1/4" · 50 Ω (PE))	0.58	50.0	89.0	8,000
LCF158-50J (1-5/8" · 50 Ω (PE))	0.42	50.0	90.0	10,000

– Characteristic impedance, propagation velocity, DC resistance at +20 °C, and dielectric withstand voltages verified per IEC 61196-7 / EN 50289 (1/2-Inch Corrugated Copper Foam-PE RF Feeder).

Standards and approvals

- IEC 61196-7 / EN 50289 (1/2-Inch Corrugated Copper Foam-PE RF Feeder)
- CE (2014/35/EU) & RoHS 3 (2015/863/EU) Compliant
- REACH SVHC Compliance Verified

Certifications

Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

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Email
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Web
tebaoflex.com/cables/cellflex-lcf12-50j-1-2-inch-low-loss-foam-dielectric-rf-feeder-cable

Typical values for this cable type, based on IEC 61196-7 / EN 50289 (1/2-Inch Corrugated Copper Foam-PE RF Feeder). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.