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PRODUCT DATASHEET

LCF12-50J

1/2" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

CELLFLEX® 1/2" low loss flexible cable



FEATURES / BENEFITS

- **Ultra Low Attenuation**
  The reduced attenuation of CELLFLEX® coaxial cable results in extremly efficient signal transfer in your RF system, especially at high frequencies.
- **Complete Shielding**
  The solid outer conductor of CELLFLEX® coaxial cable creates a continuous RFI/EMI shield that minimizes system interference.
- **Low VSWR**
  Special low VSWR versions of CELLFLEX® coaxial cables contribute to low system noise.
- **Outstanding Intermodulation Performance**
  CELLFLEX® coaxial cable's solid inner and outer conductors virtually eliminate intermods. Intermodulation performance is also confirmed with state-of-the-art equipment at the RFS factory.
- **High Power Rating**
  Due to their low attenuation, outstanding heat transfer properties and temperature stabilized dielectric materials, CELLFLEX® cable provides safe long term operating life at high transmit power levels.
- **Wide Range of Application**
  Typical areas of application are: feedlines for broadcast and terrestrial microwave antennas, wireless cellular, PCS and ESMR base stations, cabling of antenna arrays, and radio equipment interconnects

Technical features

INFORMATION		
Applications		OEM jumpers, Main feed transitions to equipment, GPS lines, intended for outdoor usage
STRUCTURE		
Size		1/2
Inner Conductor Diameter	mm (in)	4.8 (0.189)
Inner Conductor Material		Copper-Clad Aluminum Wire
Dielectric Diameter	mm (in)	11.3 (0.445)
Dielectric Material		Foam Polyethylene
Outer Conductor Diameter	mm (in)	13.8 (0.543)
Outer Conductor Material		Corrugated Copper
Jacket Diameter	mm (in)	15.8 (0.622)
Jacket Material		Black Polyethylene
TESTING AND ENVIRONMENTAL		
Phase Stabilized		Phase stabilized and phase matched cables and accessories are available upon request.
Compliance		DIN EN ISO 9001:2015 ISO 14001:2015 RoHS 2011/65/EU - China RoHS SJ/T 11364-2006 REACH (EC 1907/2006) UL1581 - UV Resistance Jacket IEC 60754-1/-2
Installation Temperature	°C(°F)	-40 to 60 (-40 to 140)
Storage Temperature	°C (°F)	-70 to 85 (-94 to 185)
Operation Temperature	°C(°F)	-50 to 85 (-58 to 185)

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

LCF12-50J

1/2" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	8.8
Velocity	%	87
Capacitance	pF/m (pF/ft)	76 (23.2)
Inductance	uH/m (uH/ft)	0.19 (0.058)
Peak Power Rating	kW	38
RF Peak Voltage	Volts	1950
Jacket Spark	Volt RMS	8000
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.62 (0.5)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	3.55 (1.08)
Passive Intermodulation PIM	min. dBc	-160
Return Loss (VSWR) Performance		Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies

MECHANICAL SPECIFICATIONS

Cable Weight, Nominal	kg/m (lb/ft)	0.18 (0.125)
Minimum Bending Radius, Single Bend	mm (in)	70 (2.756)
Minimum Bending Radius, Repeated Bends	mm (in)	125 (4.921)
Bending Moment	Nm (lb-ft)	6.5 (4.79)
Tensile Strength	N (lb)	1050 (236)
Recommended / Maximum Clamp Spacing	m (ft)	0.6 / 1 (2 / 3.25)

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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
1	0.21	0.06	35.34
100	2.18	0.66	3.45
200	3.12	0.95	2.41
450	4.77	1.45	1.57
700	6.03	1.83	1.24
800	6.48	1.97	1.16
900	6.91	2.10	1.09
1800	10.09	3.07	0.74
2000	10.70	3.26	0.70
2200	11.28	3.44	0.67
2400	11.84	3.61	0.63
2700	12.66	3.86	0.59
3000	13.43	4.01	0.56
3500	14.67	4.47	0.51

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4000	15.84	4.83	0.47
5000	18.03	5.51	0.42
6000	20.07	6.14	0.37
7000	22.0	6.73	0.34
8800	25,24	7.73	0.30

RELATED PRODUCTS

Connector Interface	**Standard Connector Series C03**	**Premium Connector Series E01**	**Premium Connector Series D01 *only on request**
N Male	NM-LCF12-C03	NM-LCF12-E01	NM-LCF12-D01
N Female	NF-LCF12-C03	NF-LCF12-E01	NF-LCF12-D01
4.3-10 Male	43M-LCF12-C03	43M-LCF12-E01	43M-LCF12-D01
4.3-10 Female	43F-LCF12-C03	43F-LCF12-E01	43F-LCF12-D01
7/16 Male	716M-LCF12-C03	716M-LCF12-E01	716M-LCF12-D01
7/16 Female	716F-LCF12-C03	716F-LCF12-E01	716F-LCF12-D01
Mandatory Tool	TRIM-SET-L12-C02	TRIM-SET-L12-D01	
Tool Information	Universal Trimming Tool For *-C02 And *-C03 Connector Series	Universal Trimming Tool For *-D01 And *-E01 Connector Series	
Installation Video	**-LCF12-C03	**-LCF12-E01	**-LCF12-D01
General Accessories			
Hand Tool Kit	TRIM-T01		
Stripping Tool For Grounding Kits	JSTRIP-12-2		
Grounding Kit	GKSPEED20-12P		

External Document Links
CELLFLEX Drum Selection Guide

Notes

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