FLEXIBLE

Coaxial Cable

FL47-6KMVM+

50Ω 6 inch DC to 40 GHz 2.92 mm Male to 2.4 mm Male

THE BIG DEAL

- Wideband frequency coverage, DC to 40 GHz
- Low Insertion Loss, 1.5 dB typ. at 40 GHz
- Excellent Return Loss, 20 dB typ. to 40 GHz
- 5 mm static bend, 10 mm dynamic bend
- Ideal for interconnect of sub-assembly systems

Generic photo used for illustration purposes only

Model No.	FL47-6KMVM+
Case Style	UL3031-6
Connectors	2.92 mm Male to 2.4 mm Male

+RoHS Compliant
The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

APPLICATIONS

- Replacement for custom bent semi-rigid cables
- Communication receivers and transmitters
- Military and aerospace systems
- Environmental and test chambers
- Test accessory

PRODUCT OVERVIEW

The FL47-6KMVM+ is ideal for interconnection of coaxial components or sub-systems. The construction includes a silver-plated copper center conductor. The outer shield is silver plated copper braid, which minimizes signal leakage and at the same time is flexible for easy bending. Dielectric is low loss FEP. Connectors have passivated stainless-steel coupling nut over a gold plated connector body with a gold plated beryllium copper center conductor. The FL47 Series Flexible cables are available in a variety of lengths to meet your requirements.

KEY FEATURES

Feature	Advantages
Flexible RF Cables	The FL47 Series Flexible cables are ideal for use integrating coaxial components and subassemblies without the need for special cable-bending tools and alleviating the risk of damageduring the bending process typical of semi-rigid coaxial cable assemblies.
Tight Bend Radius: • 5 mm static bend, 10 mm dynamic	Capable of only 5 mm static bend, 10 mm dynamic bend radius, the FL47 Flexible series is able to make connec-tions in tight spaces making these cables ideal for dense system integration.
Excellent Return Loss	The FL47-6KMVM+ is ideally suited for interconnecting a wide variety of RF components while minimizing VSWR ripple contribution due to mating cables & connectors.
Good Power Handling Capability: • 61 W at 0.5 GHz • 8 W at 18 GHz	Mini-Circuits FL47 Cable series can support medium to high RF power levels enabling these cables to be used in the transmit path. NOTE: power rating is at sea-level altitudes.

REV. C
ECO-030002
FL47-6KMVM+
MCL NY
260611

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ELECTRICAL SPECIFICATIONS AT +25 °C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC	-	40	GHz
Length[1]			6		inches
Insertion Loss	DC–26.5	-	0.8	1.66	dB
	26.5–40	-	1.3	2.1	
Return Loss	DC–26.5	19.1	31.0	-	dB
	26.5–40	17.7	27.8	-	

1. Custom sizes available, consult factory.

ABSOLUTE MAXIMUM RATINGS[2]

Parameter	Ratings
Operating Temperature	-55 °C to +100 °C
Storage Temperature	-55 °C to +100 °C
Power Handling at +25 °C, Sea Level	61 W at 0.5 GHz 16 W at 6 GHz 8 W at 18 GHz 6 W at 26.5 GHz 2 W at 40 GHz

2. Permanent damage may occur if any of these limits are exceeded.

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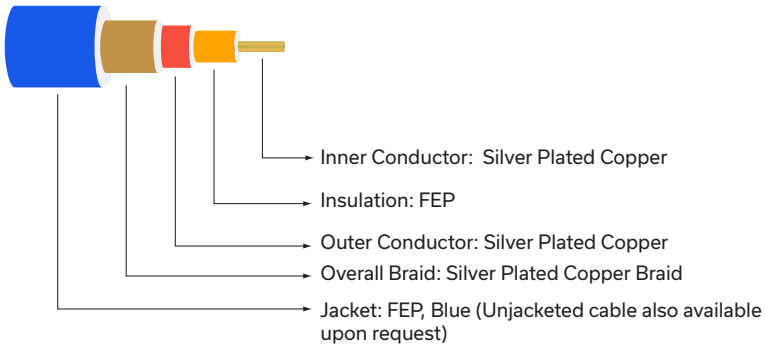
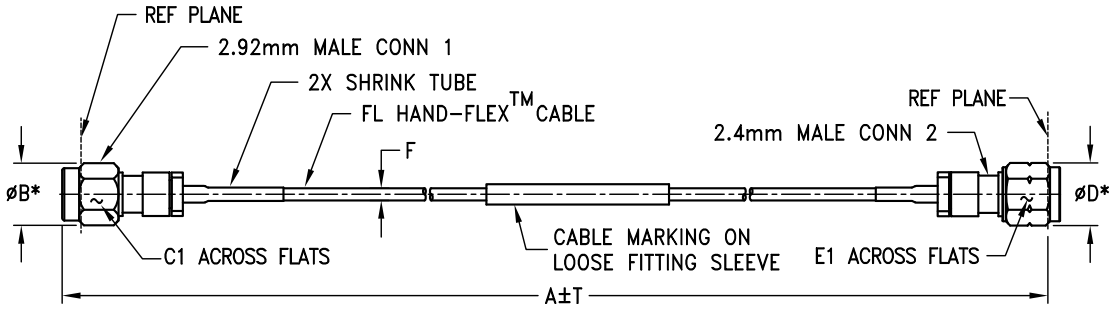
CABLE CONSTRUCTION



OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch / mm)

A	B	C1	D	E1	F	T	wt
6.0	.36	.315	.36	.315	.055	.05	grams
152.40	9.14	8.00	9.14	8.00	1.40	1.27	9.44

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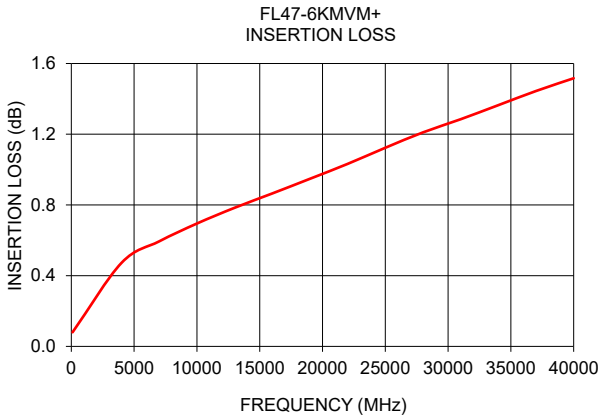
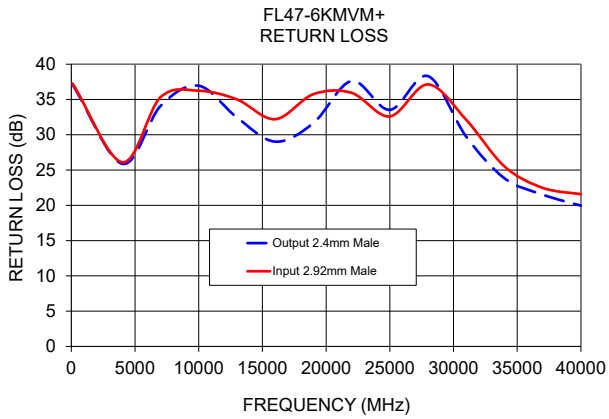
TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		Input 2.92 mm Male	Output 2.4 mm Male
100	0.08	37.1	37.3
4000	0.47	25.9	26.1
7000	0.59	34.1	35.3
10000	0.69	36.9	36.2
13000	0.78	32.4	35.0
16000	0.86	29.0	32.2
19000	0.95	31.7	35.8
22000	1.03	37.6	35.9
25000	1.12	33.5	32.6
28000	1.21	38.3	37.1
31000	1.28	29.7	32.1
34000	1.36	23.8	25.5
37000	1.44	21.5	22.5
40000	1.52	19.9	21.6





NOTES

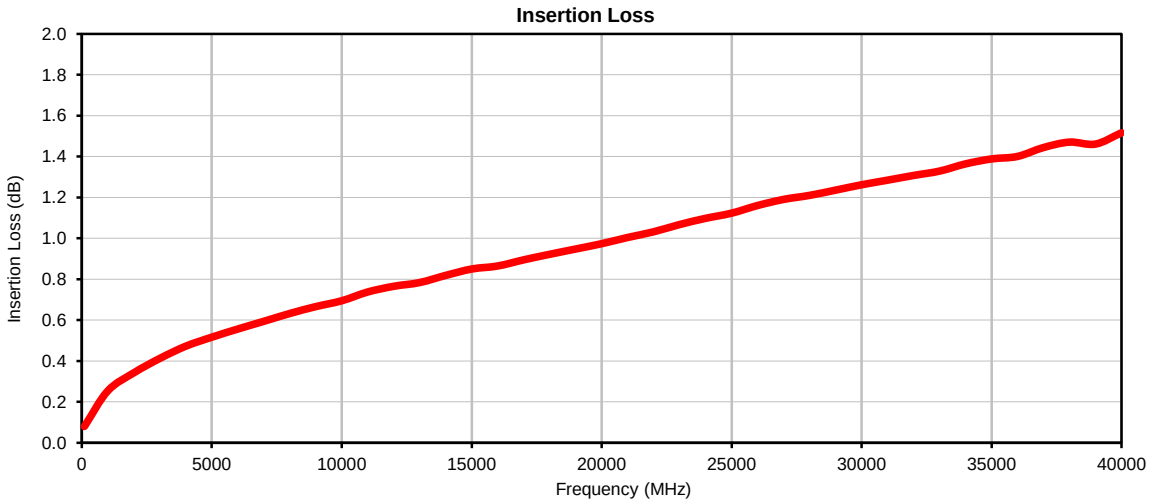
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

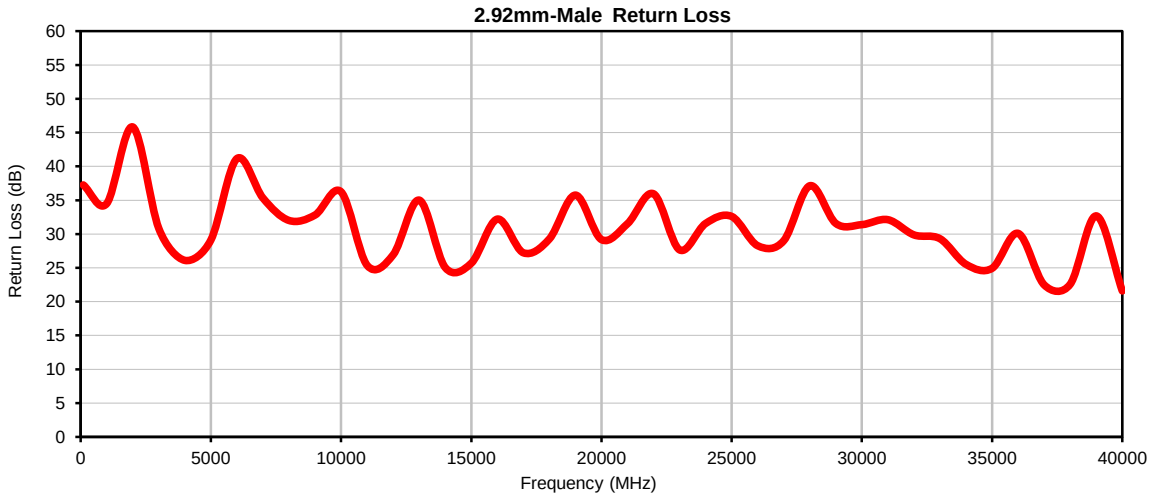
Flexible Coaxial Cable, 2.92mm-M/2.4mm-M FL47-6KMVM+

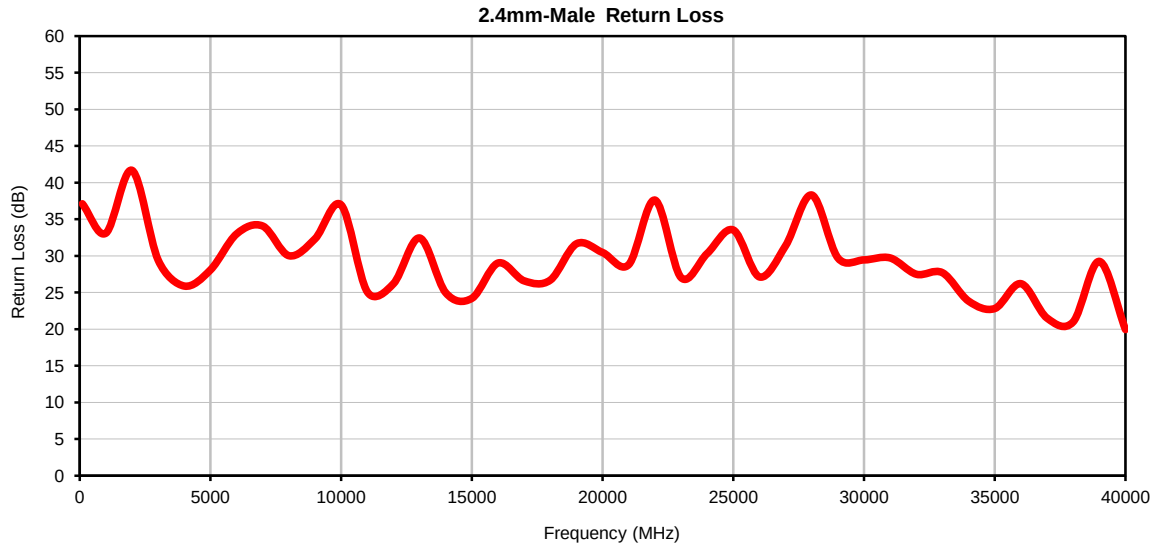
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	2.92mm-MALE RETURN LOSS (dB)	2.4mm-MALE RETURN LOSS (dB)
100	0.08	37.26	37.11
1000	0.25	34.50	33.11
2000	0.34	45.83	41.67
3000	0.41	30.82	29.42
4000	0.47	26.10	25.88
5000	0.52	29.11	28.09
6000	0.56	41.15	33.00
7000	0.59	35.32	34.08
8000	0.63	32.01	30.03
9000	0.67	32.80	32.33
10000	0.69	36.24	36.95
11000	0.74	25.37	25.09
12000	0.77	26.93	26.21
13000	0.78	35.01	32.45
14000	0.82	25.04	24.97
15000	0.85	25.68	24.21
16000	0.86	32.20	29.03
17000	0.89	27.23	26.60
18000	0.92	29.27	26.70
19000	0.95	35.75	31.65
20000	0.97	29.17	30.46
21000	1.00	31.52	28.81
22000	1.03	35.94	37.62
23000	1.07	27.66	27.05
24000	1.10	31.57	30.33
25000	1.12	32.60	33.53
26000	1.16	28.27	27.13
27000	1.19	29.01	31.39
28000	1.21	37.14	38.31
29000	1.24	31.56	29.72
30000	1.26	31.39	29.46
31000	1.28	32.12	29.72
32000	1.31	29.87	27.50
33000	1.33	29.30	27.71
34000	1.36	25.51	23.83
35000	1.39	24.93	22.82
36000	1.40	30.09	26.21
37000	1.44	22.48	21.51
38000	1.47	22.58	21.00
39000	1.46	32.68	29.25
40000	1.52	21.59	19.95

Typical Performance Curves

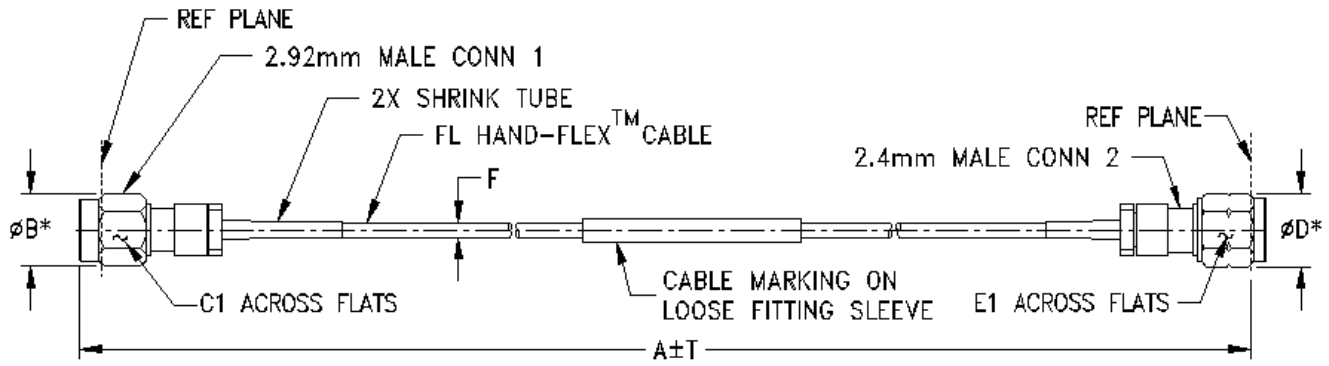






Case Style UL

Outline Dimensions UL3033



UL3030 SERIES
2.92 MM MALE (CONN 1)
2.4 MM MALE (CONN 2)

CASE STYLE #	A		B	C1	D	E1	F		T		WT. (GRAMS)
	INCH	MM					FL47U- AKMVM+ (UN-JACKETED)	FL47- AKMVM+ (JACKETED)	INCH	MM	
UL3033-6	6.00	152.40	.36 [9.14]	.315 [8.00]	.36 [9.14]	.315 [8.00]	.046±.004 [1.17±0.1]	.055±.004 [1.40±0.1]	.05	1.27	9.44
UL3033-12	12.00	304.80							.10	2.54	10.28

Unless otherwise specified dimensions are in inches (mm).
Tolerances: 2 Pl.± **.03;** 3 Pl. ± **.015**

Note:
1. 047 Flexible Coaxial Cable
2. ”A” Represents Length of cable.

Mini-Circuits®
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Environmental Specifications ENV97

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 85°C, 25 cycles	MIL-STD-202F: Method 107G