FLEX TEST™

Armored Test Cable

KBL-1M-LOW+

50Ω 1M DC to 40 GHz Low Loss 2.92 mm Male

FEATURES

- Extremely Low Insertion Loss
- Extra rugged construction includes protective shield and strain relief for longer life
- Stainless steel 40 GHz connector for long mating-cycle life
- Double shield cable for excellent shielding effectiveness
- 40 GHz 2.92 mm connector mates K*, 3.5 mm, SMA

Generic photo used for illustration purposes only

Model No.	KBL-1M-LOW+
Case Style	MA1628-3.28
Connectors	2.92 mm Male

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

APPLICATIONS

- Military and Defense applications
- Research & development labs
- Production test

ELECTRICAL SPECIFICATIONS AT +25 °C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency range		DC		40	GHz
Length			1		M
Insertion Loss	DC–6	—	1.05	1.35	dB
	6–18	—	1,87	2.15	
	18–26.5	—	2.35	2,65	
	26.5–40	—	3.05	3.35	
Return Loss	DC - 6	17	25	—	dB
	6–18	17	20	—	
	18–26.5	16	19	—	
	26.5–40	14	17	—	

*K Connector is a trademark of Anritsu.
Custom sizes availabe, consult factory.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-55°C to +85°C
Storage Temperature	-55°C to +85°C
Power Handling at +25 °C	53 W at 2 GHz 17 W at 18 GHz 15 W at 26.5 GHz 11 W at 40 GHz
Coupling Nut Torque	1.09 N-M

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

Product Guarantee*
Mini-Circuits® will repair or replace your test cable at its option if the connector attachment fails within six months of shipment. This guarantee excludes cable or connector interface damage from misuse or abuse.

REV. B
ECO-019764
KBL-1M-LOW+
MCL NY
260429

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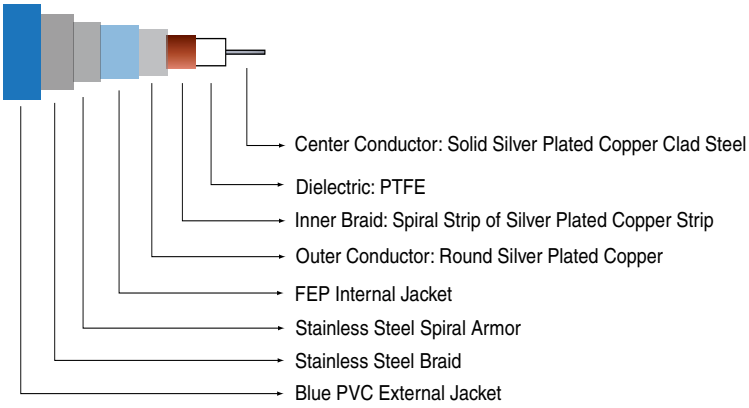
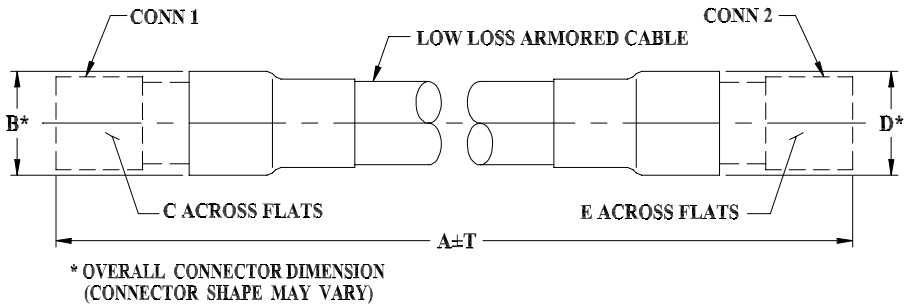
50Ω 1M DC to 40 GHz Low Loss 2.92 mm Male

CABLE CONSTRUCTION



OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch / mm)

A		B	C	D	E	T		wt
Feet	Meters	.40	.312	.40	.312	Inch	mm	grams
3.28	1.00	10.16	7.92	10.16	7.92	+.79/-0	+20.0/-0	130

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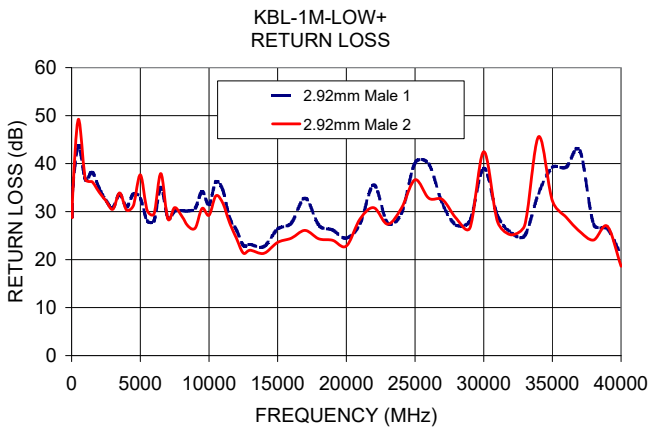
50Ω 1M DC to 40 GHz Low Loss 2.92 mm Male

TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		2.92 mm Male 1	2.92 mm Male 2
50	0.06	29.0	28.7
1000	0.38	36.7	36.8
1500	0.47	38.2	36.2
2000	0.55	34.9	34.1
4000	0.79	31.0	30.3
5000	0.88	32.7	37.7
6000	0.98	28.1	29.6
7000	1.06	28.7	28.5
8000	1.13	30.2	29.2
9000	1.21	30.7	26.6
10000	1.28	31.5	29.3
18000	1.74	27.2	24.3
26000	2.07	39.9	32.8
30000	2.25	39.0	42.5
40000	2.78	21.0	18.6



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-Circuit's 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/MCLStore/terms.jsp

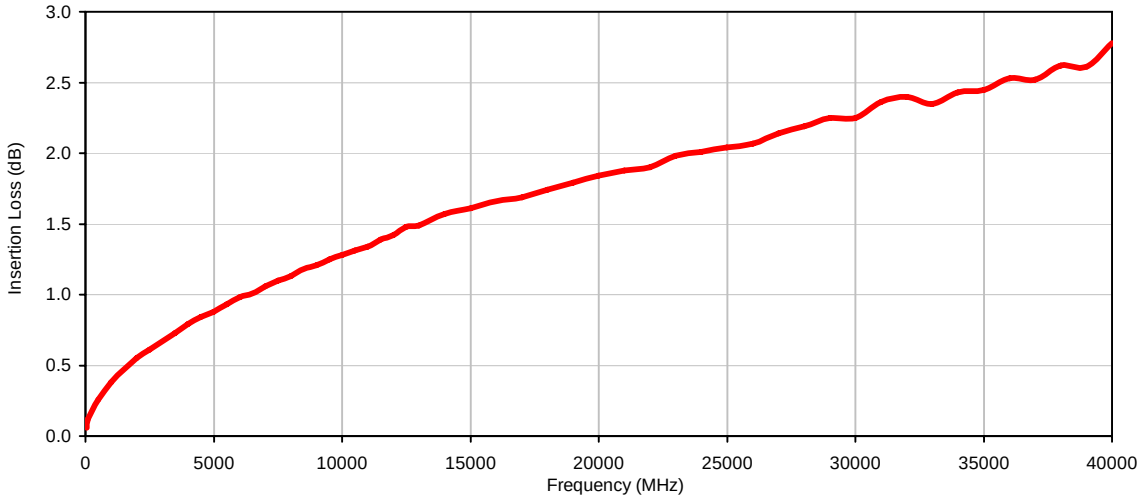
40GHz Low Loss Cable KBL-1M-LOW+

Typical Performance Data

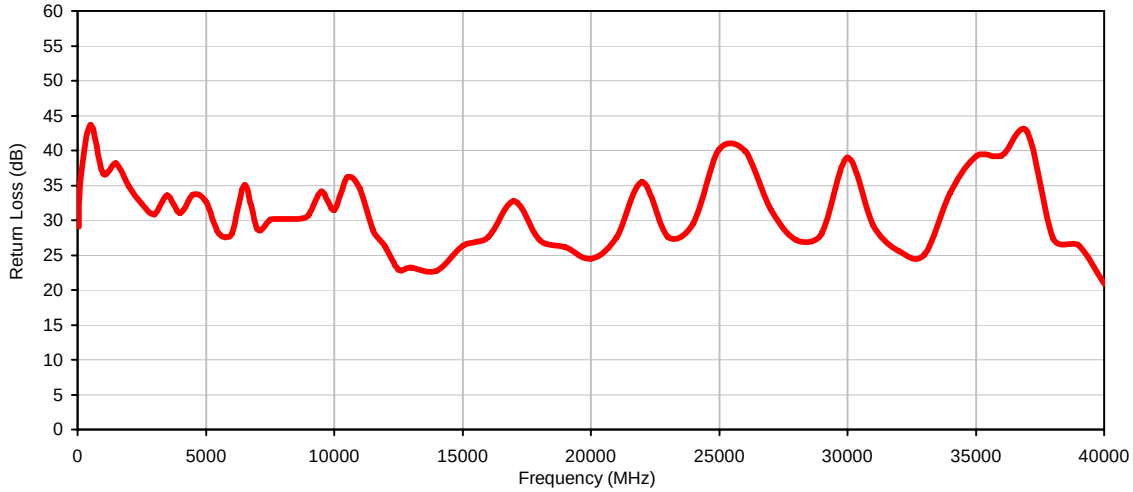
FREQUENCY (MHz)	INSERTION LOSS (dB)	2.92mm MALE 1 RETURN LOSS (dB)	2.92mm MALE 2 RETURN LOSS (dB)
50.0	0.06	29.0	28.7
100.0	0.12	35.3	35.1
500.0	0.26	43.7	49.2
1000.0	0.38	36.7	36.8
1500.0	0.47	38.2	36.2
2000.0	0.55	34.9	34.1
2500.0	0.61	32.4	32.3
3000.0	0.67	30.8	30.5
3500.0	0.73	33.6	33.9
4000.0	0.79	31.0	30.3
4500.0	0.84	33.7	31.3
5000.0	0.88	32.7	37.7
5500.0	0.93	28.1	30.3
6000.0	0.98	28.1	29.6
6500.0	1.01	35.1	37.9
7000.0	1.06	28.7	28.5
7500.0	1.10	30.1	30.8
8000.0	1.13	30.2	29.2
8500.0	1.18	30.1	26.9
9000.0	1.21	30.7	26.6
9500.0	1.25	34.2	30.7
10000.0	1.28	31.5	29.3
10500.0	1.31	36.2	33.3
11000.0	1.34	34.6	31.8
11500.0	1.39	28.7	27.7
12000.0	1.42	26.2	24.5
12500.0	1.48	23.0	21.4
13000.0	1.49	23.2	21.9
14000.0	1.57	22.7	21.3
15000.0	1.61	26.4	23.6
16000.0	1.66	27.6	24.5
17000.0	1.69	32.8	26.1
18000.0	1.74	27.2	24.3
19000.0	1.79	26.2	24.0
20000.0	1.84	24.5	22.8
21000.0	1.88	27.5	28.5
22000.0	1.90	35.5	30.8
23000.0	1.98	27.6	27.4
24000.0	2.01	29.6	30.7
25000.0	2.04	40.1	36.6
26000.0	2.07	39.9	32.8
27000.0	2.14	31.6	32.5
28000.0	2.19	27.2	28.6
29000.0	2.25	28.1	26.6
30000.0	2.25	39.0	42.5
31000.0	2.36	29.3	28.0
32000.0	2.40	25.6	25.2
33000.0	2.35	25.1	27.3
34000.0	2.43	33.8	45.6
35000.0	2.45	39.2	32.3
36000.0	2.53	39.3	28.9
37000.0	2.52	42.7	25.9
38000.0	2.62	27.4	24.1
39000.0	2.61	26.4	27.0
40000.0	2.78	21.0	18.6

Typical Performance Curves

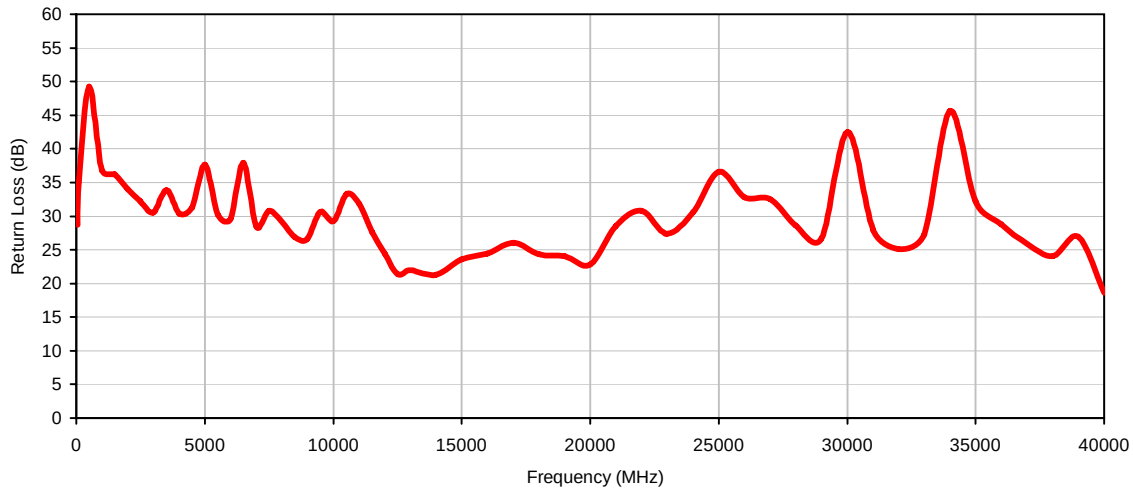
Insertion Loss



2.92mm-Male 1 Return Loss



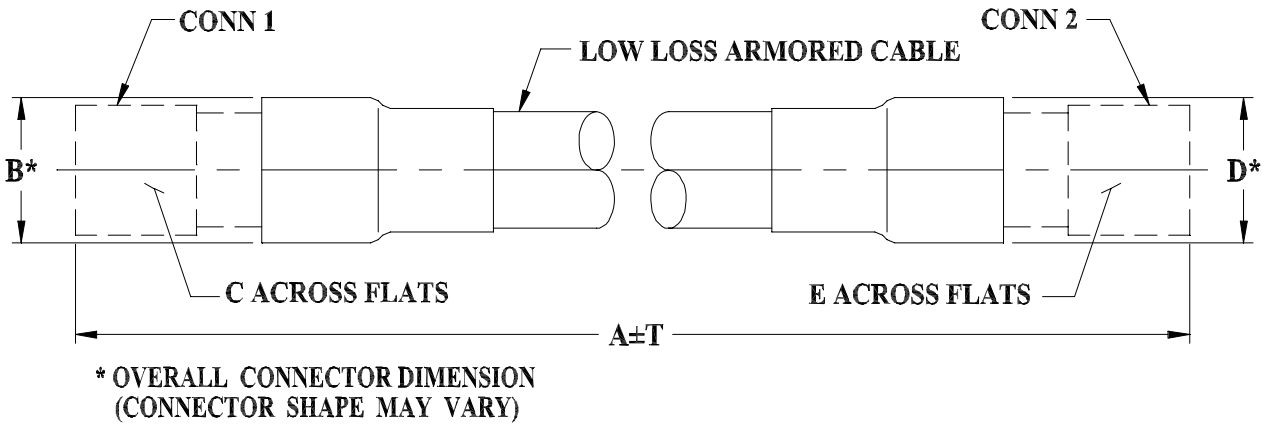
2.92mm-Male 2 Return Loss



Case Style MA

MA1628

Outline Dimensions



MA1628 SERIES
2.92mm K-MALE (CONN-1)
2.92mm K-MALE (CONN-2)

CASE STYLE #	A		B	C	D	E	T		WEIGHT GRAMS
	FEET	METERS					INCH	MM	
MA1628-1.5	1.50	.46	.40 (10.16)	.312 (7.92)	.40 (10.16)	.312 (7.92)	+.50/-0	+12.7/-0	75
MA1628-2	2.00	.61					+.50/-0	+12.7/-0	91
MA1628-3.28	3.28	1.00					+.79/-0	+20.0/-0	130
MA1628-4	4.00	1.22					+.96/-0	+24.4/-0	152
MA1628-6.56	6.56	2.00					+1.57/-0	+40.0/-0	231

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

Note:
1. Low Loss Armored Flexible Cable.

Mini-Circuits®
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Mini-Circuits

Environmental Specifications ENV60

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 85°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 85° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100° C, 100 cycles	MIL-STD-202, Method 107, Condition A-3
Mechanical Flexing	20,000 cycles During each cycle, cable flexed from 90° through 0° to -90° and back with a Radii of 3 inches	- - -

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