



# Armored Test Cable

50Ω 2M DC to 40 GHz Low Loss

## KBL-2M-LOW+



CASE STYLE: MA1628-6.56

Connectors	Model
2.92mm Male	KBL-2M-LOW+

### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Maximum Ratings

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

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

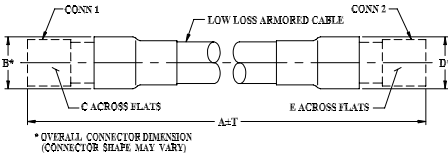
### Features

- 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 connector mates with 2.92 mm, K\*, 3.5mm, SMA

### Applications

- military and defense applications
- research & development labs

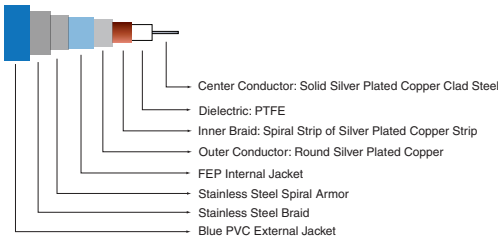
### Outline Drawing



### Outline Dimensions (inch/mm)

	A	B	C	D	E	T	wt
Feet	6.56	2.00	10.16	7.92	10.16	7.92	+1.57/-0
Meters		.40	.312	.40	.312	Inch	mm
							grams

### Cable Construction



### Electrical Specifications at 25°C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		40	GHz
Length			2		M
Insertion Loss	DC - 6	—	1.92	2.35	dB
	6 - 18	—	3.41	3.75	
	18 - 26.5	—	4.27	4.65	
	26.5 - 40	—	5.46	5.75	
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 available, consult factory.

### Typical Performance Data

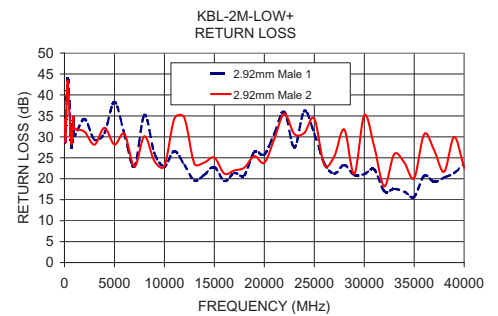
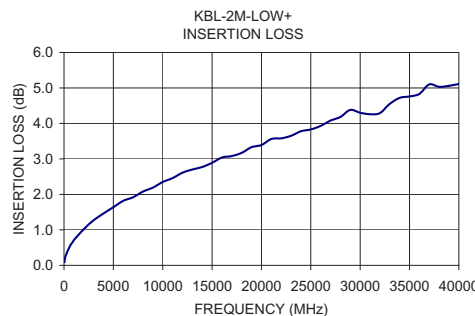
Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		MALE 1	MALE 2
50.0	0.09	34.3	34.2
2000.0	1.02	34.3	31.2
4000.0	1.46	30.9	32.2
6000.0	1.82	30.6	30.7
10000.0	2.35	23.0	23.0
15000.0	2.89	22.8	25.0
18000.0	3.17	20.8	22.7
20000.0	3.39	25.8	23.8
26000.0	3.93	23.7	23.3
28000.0	4.18	23.3	31.7
30000.0	4.30	21.1	35.2
32000.0	4.29	17.1	18.2
36000.0	4.83	20.7	30.7
38000.0	5.03	20.3	21.7
40000.0	5.11	23.5	22.6

### 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.

### Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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](http://www.minicircuits.com/MCLStore/terms.jsp)



# 40GHz Low Loss Cable

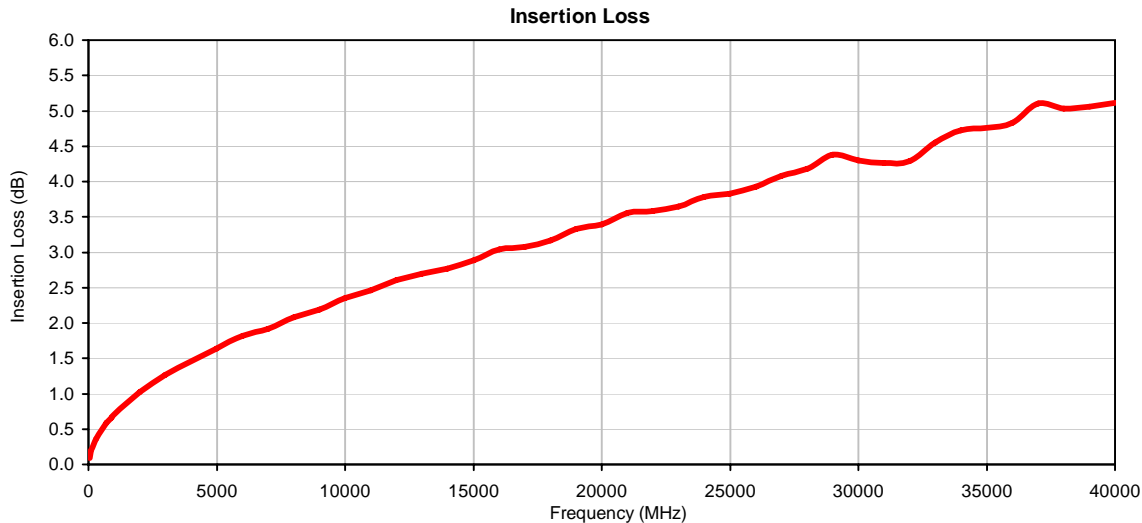
# KBL-2M-LOW+

## Typical Performance Data

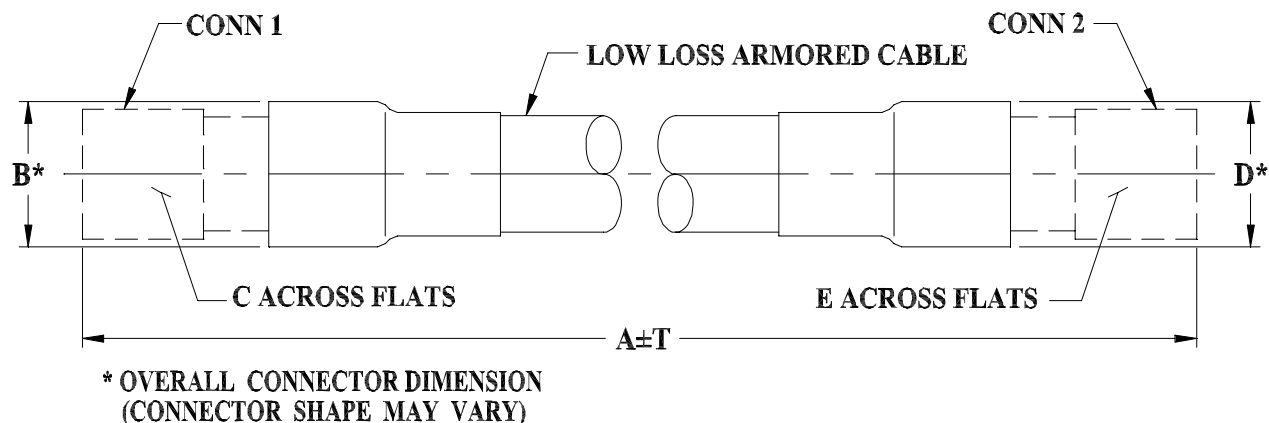
FREQUENCY (MHz)	INSERTION LOSS (dB)	2.92mm MALE 1 RETURN LOSS (dB)	2.92mm MALE 2 RETURN LOSS (dB)
50.0	0.09	34.3	34.2
100.0	0.20	29.0	28.9
300.0	0.36	43.7	43.4
500.0	0.48	38.0	35.8
700.0	0.59	27.6	28.3
900.0	0.66	34.5	34.7
1000.0	0.71	30.3	32.1
2000.0	1.02	34.3	31.2
3000.0	1.27	29.4	28.1
4000.0	1.46	30.9	32.2
5000.0	1.64	38.3	28.1
6000.0	1.82	30.6	30.7
7000.0	1.92	22.9	22.9
8000.0	2.08	35.2	30.1
9000.0	2.19	26.0	24.2
10000.0	2.35	23.0	23.0
11000.0	2.46	26.6	34.3
12000.0	2.61	23.3	34.6
13000.0	2.70	19.6	23.6
14000.0	2.77	21.0	23.9
15000.0	2.89	22.8	25.0
16000.0	3.04	19.5	21.2
17000.0	3.08	21.4	22.0
18000.0	3.17	20.8	22.7
19000.0	3.33	26.4	25.4
20000.0	3.39	25.8	23.8
21000.0	3.56	30.8	29.5
22000.0	3.58	36.0	35.5
23000.0	3.65	27.4	30.7
24000.0	3.78	36.2	30.9
25000.0	3.83	30.8	34.4
26000.0	3.93	23.7	23.3
27000.0	4.08	21.2	25.4
28000.0	4.18	23.3	31.7
29000.0	4.38	20.9	21.2
30000.0	4.30	21.1	35.2
31000.0	4.26	22.2	27.7
32000.0	4.29	17.1	18.2
33000.0	4.55	17.6	25.9
34000.0	4.72	17.0	23.9
35000.0	4.76	15.7	20.2
36000.0	4.83	20.7	30.7
37000.0	5.10	19.3	26.8
38000.0	5.03	20.3	21.7
39000.0	5.06	21.4	30.0
40000.0	5.11	23.5	22.6



## Typical Performance Curves



### 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.  $\pm .03$ ; 3Pl.  $\pm .015$

#### Note:

1. Low Loss Armored Flexible Cable.



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	- - -