COAXIAL

Armored Flexible Cable WBL-0.5FTW1F1M+

50Ω DC to 110 GHz 6 Inches 1.0 mm-Female to 1.0 mm-Male

KEY FEATURES

- Ultra-wideband DC to 110 GHz
- Low insertion loss, 2.5 dB, typ.
- Excellent return loss, 24.2 dB, typ.
- Strong protective jacket

Generic photo used for illustration purposes only

APPLICATIONS

- Optical communications
- Test & Measurement
- High-speed data systems
- Instrumentation
- Precision Measurement

HANDLING INSTRUCTIONS
1.0 mm connectors require specific handling and torque values. See Mini-Circuits Application Note AN-71-001 for detail.

PRODUCT OVERVIEW

WBL-0.5FTW1F1M+ cable is ideal for interconnecting coaxial components and subassemblies in a wide range of systems, including test and measurement, instrumentation, and more. This braided flexible cable provides a minimum bend radius of 26 mm to accommodate tight layouts without the need for bending tools, adapters or brackets.

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC	-	110	GHz
Length			6		inches
Insertion Loss	DC – 35	-	0.9	3.7	dB
	35 – 75	-	1.8	3.7	
	75 – 110	-	2.5	3.7	
Return Loss	DC – 35	14.0	31.6	-	dB
	35 – 75	14.0	24.1	-	
	75 – 110	14.0	24.2	-	

ABSOLUTE MAXIMUM RATINGS[1]

Operating Case Temperature	-45°C to +80°C
Storage Temperature	-45°C to +80°C
Average Power Handling at Sea Level	14.4 W at 6 GHz
	7.9 W at 18 GHz
	5.0 W at 40 GHz
	3.6 W at 67 GHz
	2.7 W at 110 GHz

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

REV. OR
ECO-023939
WBL-0.5FTW1F1M+
MCL NY
241212

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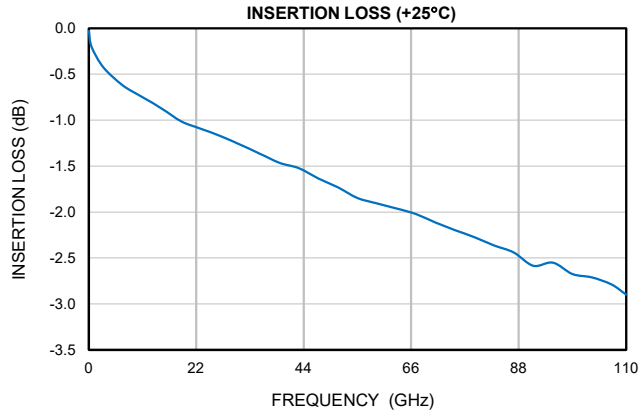
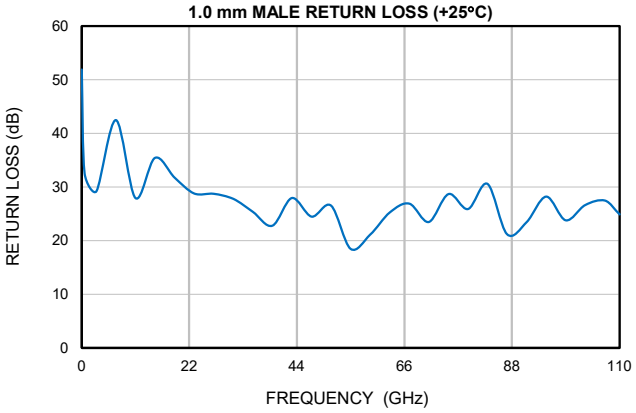
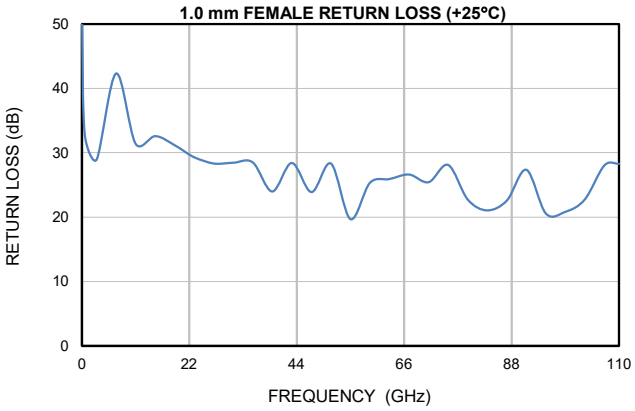
TYPICAL PERFORMANCE GRAPHS







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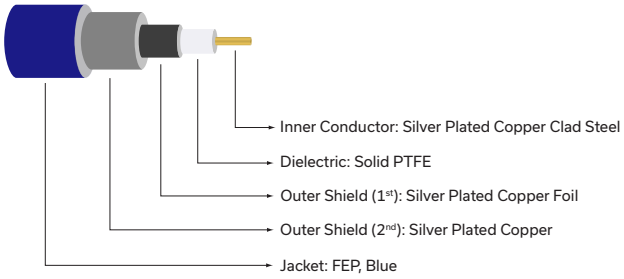
COAXIAL CONNECTIONS

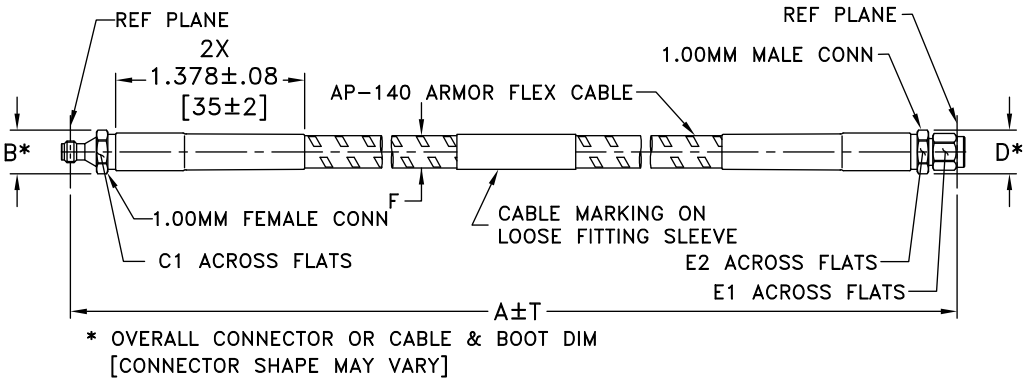
Description	Connector 1	Connector 2
Connector Type	1.0 mm Female	1.0 mm Male
Orientation	Straight	Straight

CABLE CONSTRUCTION[2]



2. Cable construction drawing does not include the armored braiding

CASE STYLE DRAWING



Unless Otherwise Specified dimensions are in inches [mm]
Tolerances:2 Pl.±0.03 [0.76]; 3 Pl. ±0.015[0.38] inches [mm]

OUTLINE DIMENSIONS (Inch / mm)

A	B	C1	C2	D	E1	E2	F	T	wt
6.00	.32	.276	-	0.32	0.236	0.276	.221±.008	.10	grams
152.40	8.1	7.00	-	8.1	6.00	7.00	5.6 ± 0.2	2.54	20.6

PRODUCT MARKING*: WBL-0.5FTW1F1M+

*Marking may contain other features or characters for internal lot control.

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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD CLICK HERE

Performance Data & Graphs	Data Graphs S-Parameter (S2P Files) Data Set (.zip file)
Case Style	AAG3496-6
RoHS Status	Compliant
Environmental Ratings	ENV143

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 https://www.minicircuits.com/terms/viewterm.html

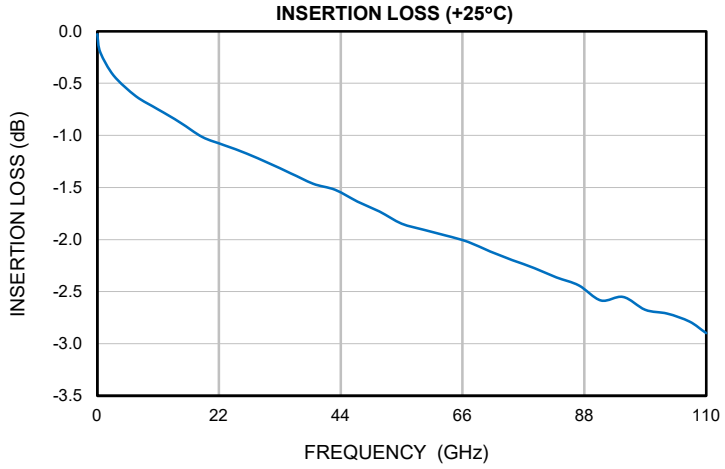
Armored Flexible Cable 1.0 mm Female to 1.0 mm Male

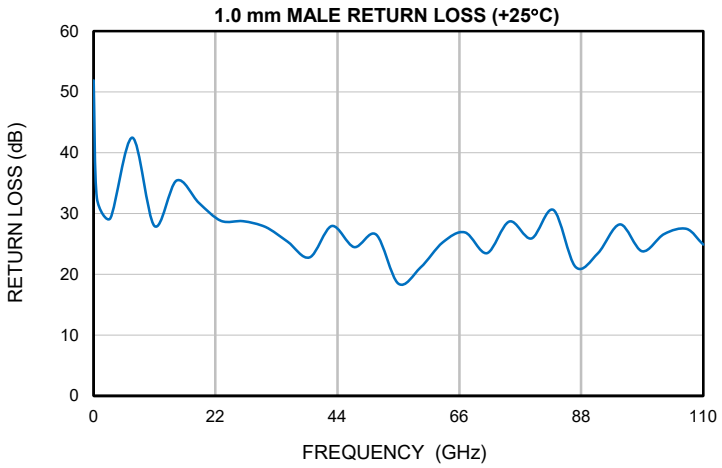
WBL-0.5FTW1F1M+

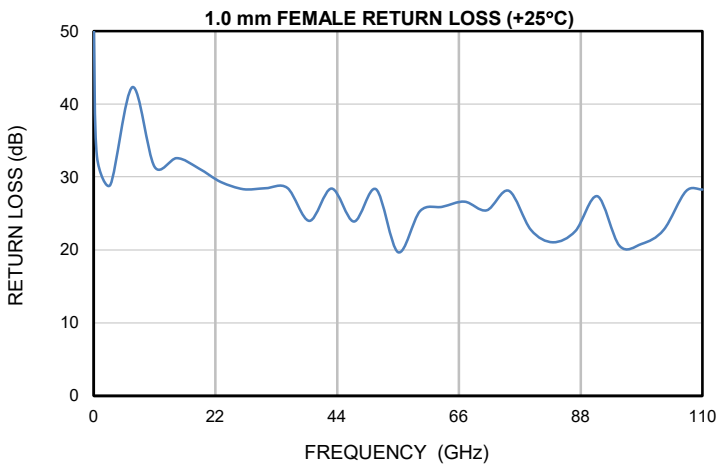
Typical Performance Data

FREQ.	INSERTION LOSS	1.0 mm MALE RETURN LOSS	1.0 mm FEMALE RETURN LOSS
(GHz)	(dB)	(dB)	(dB)
0	0.03	51.87	51.61
1	0.20	32.54	32.80
3	0.42	29.21	28.93
7	0.62	42.45	42.32
11	0.75	27.94	31.39
15	0.87	35.41	32.60
19	1.01	31.73	31.19
23	1.09	28.78	29.31
27	1.17	28.72	28.34
31	1.26	27.76	28.45
35	1.36	25.35	28.50
39	1.46	22.76	23.99
43	1.52	27.92	28.41
47	1.63	24.48	23.88
51	1.73	26.51	28.31
55	1.85	18.47	19.71
59	1.91	21.09	25.32
63	1.96	25.26	25.92
67	2.02	26.89	26.62
71	2.11	23.49	25.43
75	2.20	28.68	28.12
79	2.28	25.88	22.75
83	2.36	30.57	21.06
87	2.44	21.18	22.59
91	2.58	23.48	27.34
95	2.55	28.20	20.56
99	2.67	23.78	20.83
103	2.71	26.63	22.75
107	2.79	27.45	28.08
110	2.90	24.88	28.29

Typical Performance Curves

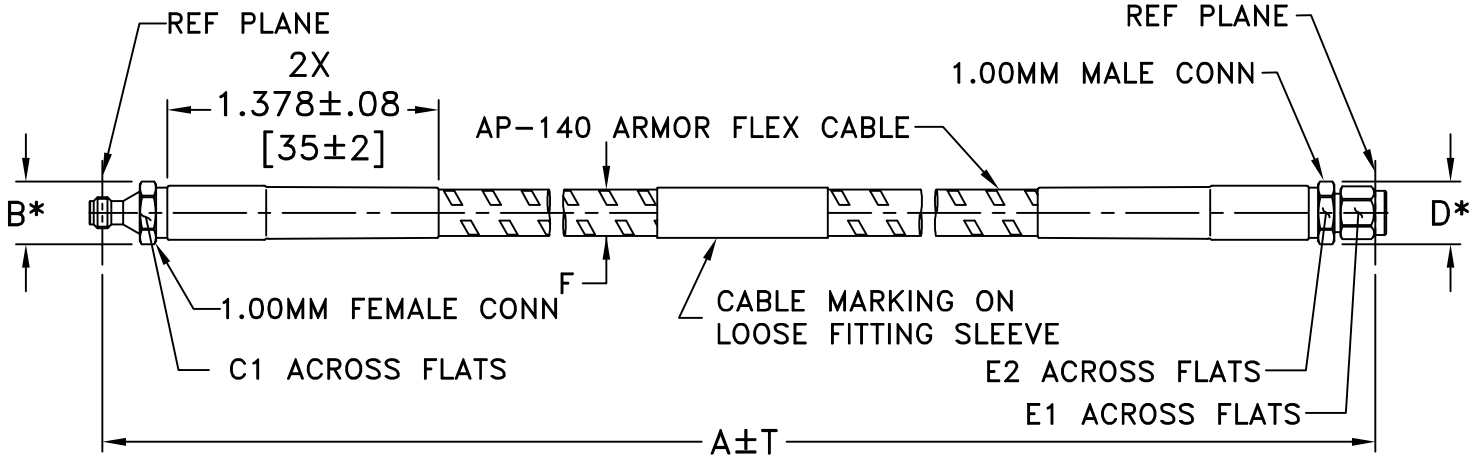






Case Style AAG

Outline Dimensions AAG3496



* OVERALL CONNECTOR OR CABLE & BOOT DIM
[CONNECTOR SHAPE MAY VARY]

CASE #	A		B	C1	C2	D	E1	E2	F	T		WEIGHT
	INCH	MM							AF047-A-1F1M+	INCH	MM	GRAMS
AAG3496-6	6.00	152.40								.10	2.54	20.6
AAG3496-12	12.00	304.80								.15	3.81	28.4
			.32 [8.1]	.276 [7.00]	– –	.32 [8.1]	.236 [6.00]	.276 [7.00]	.221±.008 [5.6±0.2]			

Unless Otherwise Specified dimensions are in inches [mm],
Tolerances: 2 Pl.±0.03[0.76]; 3 Pl. ±0.015[0.38] inches[mm]

Notes:
1. AP-140 Armor Flexible Cable.
2. "A" Represents Length of Cable.

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Environmental Specifications ENV143

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	-45° to 80°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-45° to 80°C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-45° to 80°C, 100 cycles	MIL-STD-202; Method 107G
Mechanical Flexing	1000 cycles During each cycle, cable flexed from 90° through 0° to -90° and back	----

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