FLEX TEST™ *Quick-Connect*

Test Cable

50Ω 2FT DC to 18 GHz

CBL2SMQ-NM+

CASE STYLE: GM1105-2

Connectors		Model
Conn1	**Conn2**	
SMA-MALE**	**N-MALE**	CBL2SMQ-NM+

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-55°C to 105°C
Storage Temperature	-55°C to 105°C

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

Shielding Effectiveness	>100 dB
Power Handling at 25°C	891W Max. at 0.4 GHz
	539W Max. at 1 GHz
	363W Max. at 2 GHz
	180W Max. at 6 GHz
	117W Max. at 12 GHz
	88W Max. at 18 GHz
Jacket	Clear FEP

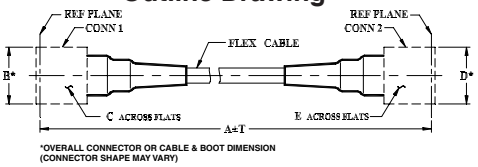
Features

- RoHS compliant
- wideband coverage, DC to 18 GHz
- extra rugged construction with strain relief for longer life
- stainless steel connectors for long mating-cycle life
- useful over temperature range, -55°C to 105°C
- triple shield cable for excellent shielding effectiveness
- flexible for easy connection & bend radius
- superior stability of insertion loss, VSWR & phase vs. flexing
- 6 month guarantee*

Applications

- high volume production test stations
- research & development labs
- environmental & temperature test chambers
- replacement for OEM test port cables
- field RF testing
- cellular infrastructure site testing

Outline Drawing



*OVERALL CONNECTOR OR CABLE & BOOT DIMENSION (CONNECTOR SHAPE MAY VARY)

Outline Dimensions (inch / mm)

A		B	C	D	E	T		wt
Feet	Meters	0.42	0.312	0.88	.750	Feet	Meters	grams
2	0.61	10.67	7.92	22.35	19.05	0.06	0.02	95

Electrical Specifications at 25˚C

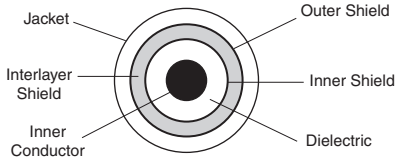
FREQ. (GHz)	LENGTH (FT)	INSERTION LOSS (dB)								RETURN LOSS (dB)							
		DC-2.5 GHz		2.5-6 GHz		6-12 GHz		12-18 GHz		DC-2.5 GHz		2.5-6 GHz		6-12 GHz		12-18 GHz	
f_L-f_U		Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
DC-18	2	0.4	0.6	0.7	0.95	1.1	1.4	1.4	1.75	30	23	30	20	27	17	27	17

Custom sizes available, consult factory.
*** Quick-turn connector, 1.5T to mate on SMA side only (marking: 1T)*

Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		SMA-MALE	N-MALE
10.00	0.03	41.25	43.11
100.00	0.08	43.91	41.75
1000.00	0.27	35.66	35.94
2000.00	0.40	35.45	35.43
3000.00	0.50	37.62	40.92
4000.00	0.59	36.87	37.69
5000.00	0.66	37.38	38.73
6000.00	0.73	37.36	44.35
7000.00	0.80	34.33	39.88
8000.00	0.87	30.15	29.50
9000.00	0.93	31.51	32.22
10000.00	1.00	28.39	30.32
13000.00	1.17	24.26	26.06
15000.00	1.31	25.34	25.28
18000.00	1.49	24.18	22.50

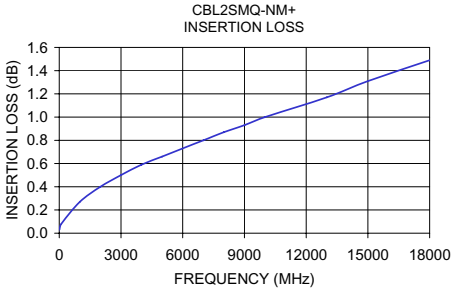
Cable Cross Section

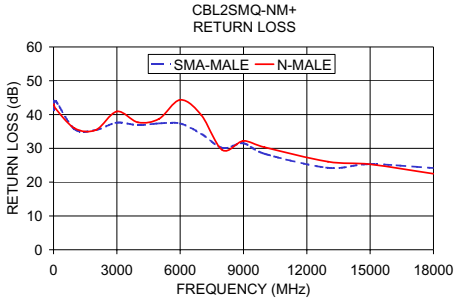


Cable Construction	
Inner Conductor	Solid Silver Plated Copper Clad Steel
Dielectric	Solid PTFE
Shield	Silver-Plated Copper Flat Ribbon Braid Aluminum-Polymide Tape Interlayer 36 GA Silver-Plated Copper Braid (90%k)
Jacket	Clear FEP
Connectors	
• passivated stainless steel • captive contact • thick wall interface (SMA) • gold plated beryllium copper center contacts • PTFE dielectric	

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
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

Test Cable, SMA-Male/N-Male CBL2SMQ-NM+

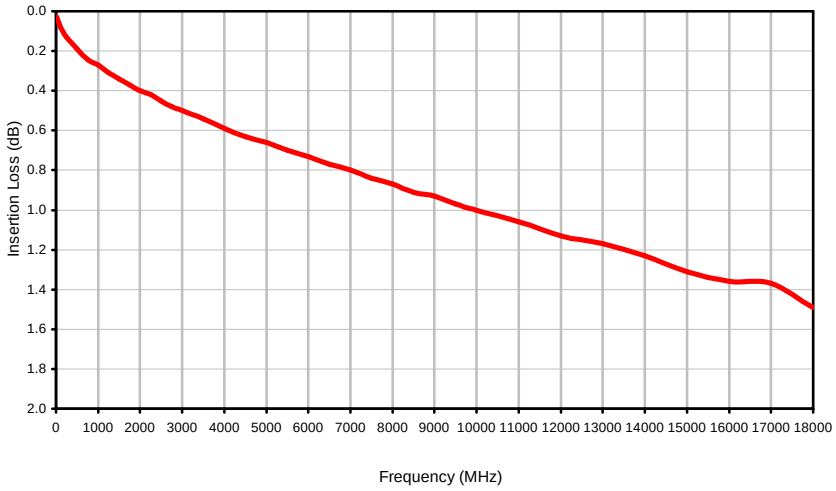
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	SMA-MALE RETURN LOSS (dB)	N-MALE RETURN LOSS (dB)
10	0.03	41.25	43.11
100	0.08	43.91	41.75
250	0.13	41.86	40.14
500	0.19	39.51	38.39
750	0.24	36.20	35.84
1000	0.27	35.66	35.94
1250	0.31	35.30	35.59
1500	0.34	34.30	35.04
1750	0.37	34.41	34.87
2000	0.40	35.45	35.43
2250	0.42	35.79	35.47
2500	0.45	37.07	39.21
2750	0.48	37.99	40.90
3000	0.50	37.62	40.92
3500	0.54	37.29	41.20
4000	0.59	36.87	37.69
4500	0.63	37.81	38.47
5000	0.66	37.38	38.73
5500	0.70	38.74	44.31
6000	0.73	37.36	44.35
6500	0.77	35.91	42.38
7000	0.80	34.33	39.88
7500	0.84	31.04	31.96
8000	0.87	30.15	29.50
8500	0.91	30.74	29.37
9000	0.93	31.51	32.22
9500	0.97	30.90	31.83
10000	1.00	28.39	30.32
11000	1.06	27.47	29.98
12000	1.13	26.25	28.41
13000	1.17	24.26	26.06
14000	1.23	23.68	26.21
15000	1.31	25.34	25.28
16000	1.36	23.55	23.70
17000	1.37	23.27	23.24
18000	1.49	24.18	22.50

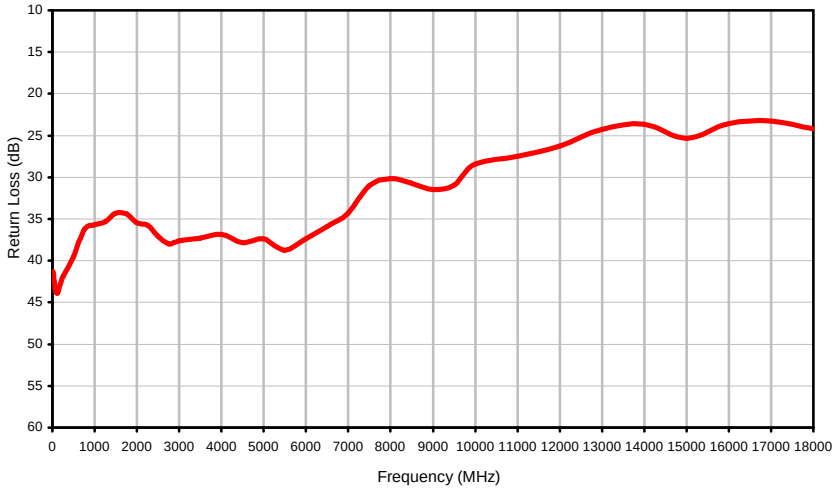
Test Cable, SMA-Male/N-Male CBL2SMQ-NM+

Typical Performance Curves

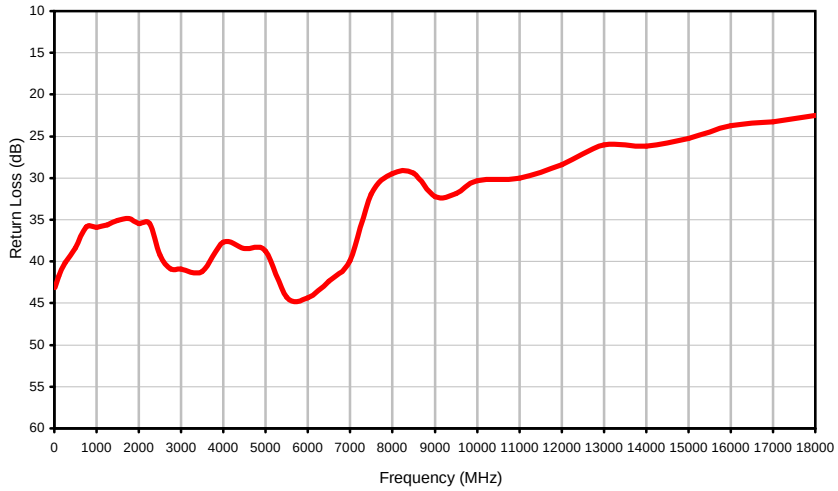
Insertion Loss



SMA-Male Return Loss



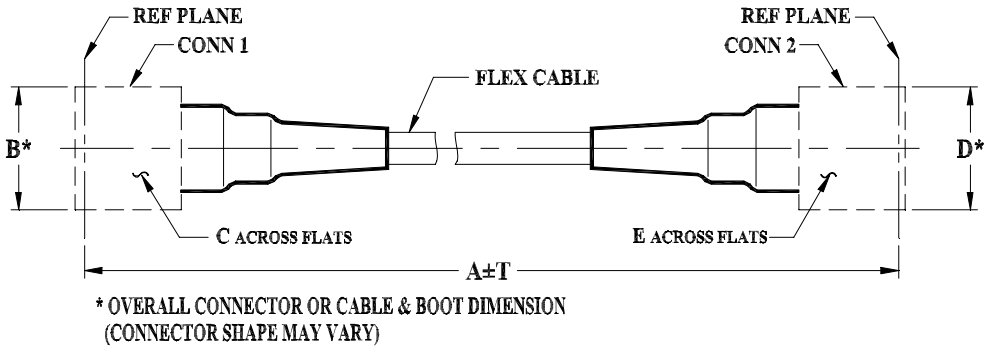
N-Male Return Loss



Case Style GM

GM1105

Outline Dimensions



GM1105 SERIES
SMA MALE (CONN-1)
N MALE (CONN-2)

CASE STYLE #	A		B	C	D	E	T		WEIGHT GRAMS
	FEET	METERS					FEET	METERS	
GM1105-1	1.00	.30	0.42 (10.67)	0.312 (7.92)	0.88 (22.35)	0.750 (19.05)	.06	.02	76
GM1105-1.15	1.15	.35					.06	.02	79
GM1105-1.25	1.25	.38					.06	.02	81
GM1105-1.5	1.50	.46					.06	.02	86
GM1105-1.64	1.64	.50					.06	.02	88
GM1105-2	2.00	.61					.06	.02	95
GM1105-3	3.00	.91					.09	.03	115
GM1105-3.28	3.28	1.00					.10	.03	120
GM1105-4	4.00	1.22					.12	.04	134
GM1105-4.92	4.92	1.50					.15	.05	152
GM1105-5	5.00	1.52					.15	.05	154
GM1105-6	6.00	1.83					.18	.05	173
GM1105-6.56	6.56	2.00					.20	.06	184
GM1105-7	7.00	2.13					.21	.06	193
GM1105-8	8.00	2.44					.24	.07	212
GM1105-9	9.00	2.74					.27	.08	232
GM1105-9.84	9.84	3.00					.30	.09	248
GM1105-10	10.00	3.05					.30	.09	251
GM1105-11	11.00	3.35					.33	.10	271

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

Note:
1. Flexible Coaxial Cable.
2. +.51 [13.00], -0 [0]

Mini-Circuits®
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Mini-Circuits ISO 9001 & ISO 14001 Certified

Case Style GM

GM1105 SERIES

SMA MALE (CONN-1)
N MALE (CONN-2)

CASE STYLE #	A		B	C	D	E	T		WEIGHT GRAMS
	FEET	METERS					FEET	METERS	
GM1105-12	12.00	3.66	0.42 (10.67)	0.312 (7.92)	0.88 (22.35)	0.750 (19.05)	.36	.11	290
GM1105-13.1	13.12	4.00					.39	.12	312
GM1105-14	14.00	4.27					.42	.13	329
GM1105-15	15.00	4.57					.45	.14	349
GM1105-16	16.00	4.88					.48	.15	368
GM1105-21	21.00	6.40					.63	.19	466
GM1105-22	22.00	6.71					.66	.20	485
GM1105-25	25.00	7.62					.75	.23	544
GM1105-35	35.00	10.67					1.05	.32	739
GM1105-39.4	39.37	12.00					1.18	.36	824
GM1105-40	40.00	12.19					1.20	.37	836

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

Mini-Circuits

Environmental Specifications ENV34

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 105°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 105°C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 105°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except -105°C
Mechanical Flexing	20,000 cycles During each cycle, cable flexed from 90° through 0° to -90° and back with a Radii of 3 inches	- - -