

CASE STYLE: RG2513-3

Connectors	Model
2.4mm Male	E50-3FT-VMVM+

+RoHS Compliant

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

Operating Temperature -40°C to +70°C

Storage Temperature	-55°C to +85°C
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Power Handling at 25°C, 54W at 2 GHz

Sea Level 17W at 18 GHz

13W at 26.5 GHz

11W at 40 GHz

7W at 50 GHz

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

- low insertion loss
- stainless steel 50 GHz connector for long mating-cycle life
- good amplitude and phase stability vs flexing over frequency
- 50 GHz connector mates with 2.4 mm, V*

- military and defense applications
- research & development labs
- field RF testing
- environmental and temperature test chambers

A technical diagram of a high-performance cable assembly. The cable is shown horizontally, with two connectors labeled 'CONN 1' and 'CONN 2' at each end. The cable itself is labeled 'HIGH PERFORMANCE CABLE'. A 'CABLE MARKING ON LOOSE FITTING SLEEVE' is indicated in the middle of the cable. The diagram shows the cable passing through a sleeve that has 'C ACROSS FLATS' at the left end and 'E ACROSS FLATS' at the right end. The overall length of the assembly is marked as 'A ± T'. The distance from the center of the cable to the end of the sleeve is marked as 'F'. The distance from the center of the cable to the end of the connector is marked as 'D'. The distance from the center of the cable to the end of the sleeve is marked as 'B*'. The distance from the center of the cable to the end of the connector is marked as 'D'.

* OVERALL CONNECTOR OR CABLE & BOOT DIM
FOR CONNECTOR SHAPE MAY VARY

A		B	C	D	E	F	T		wt
Feet	Meters	0.36	.312	0.36	.312	.100	Inch	MM	grams
3.00	0.91	9.14	7.92	9.14	7.92	2.54	+72/-0	+18.3/-0	41

Center Conductor: Solid SPC
Dielectric: Foamed PTFE
Outer Conductor: SPC Strip
Outer shield: SPC Braid
FEP (Color may vary)

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


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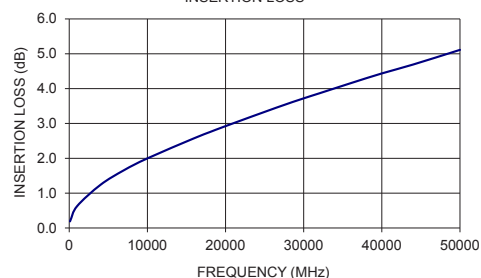
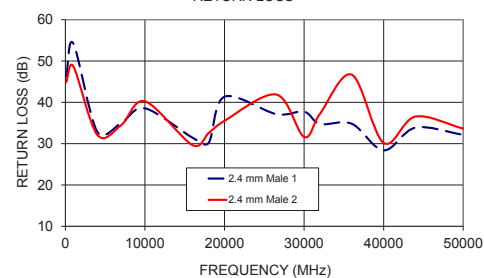
www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		50	GHz
Length		3			FT
Insertion Loss	DC - 18	—	2.8	3.3	dB
	18 - 26.5	—	3.5	4.2	
	26.5 - 40	—	4.4	5.5	
	40 - 50	—	5.1	6.3	
Return Loss	DC - 18	19	20	—	dB
	18 - 26.5	17	20	—	
	26.5 - 40	16	18	—	
	40 - 50	15	17	—	

*V Connector is a trademark of Anritsu

Custom sizes available, consult factory

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		2.4 mm Male 1	2.4 mm Male 2
100	0.19	46.3	44.9
1000	0.62	54.2	48.7
4000	1.24	32.9	32.2
7000	1.66	35.0	34.5
10000	2.00	38.6	40.2
16000	2.58	31.4	29.6
18000	2.75	30.2	32.6
20000	2.92	41.4	35.5
26500	3.45	37.2	41.9
30000	3.72	37.7	31.6
32000	3.86	34.8	37.2
36000	4.15	34.8	46.7
40000	4.44	28.4	30.2
44000	4.69	33.9	36.6
50000	5.11	32.2	33.7

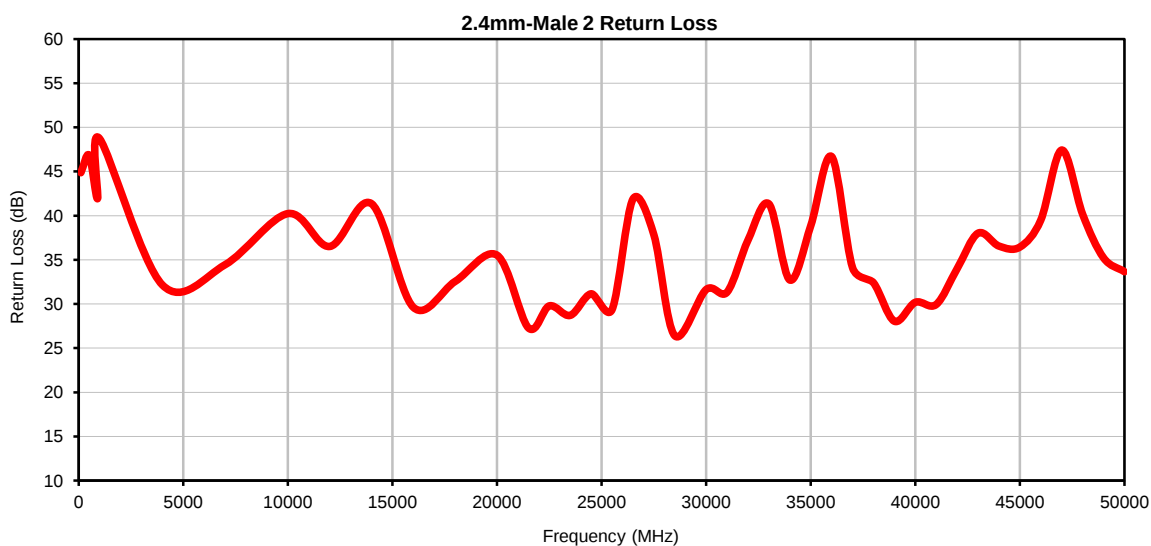
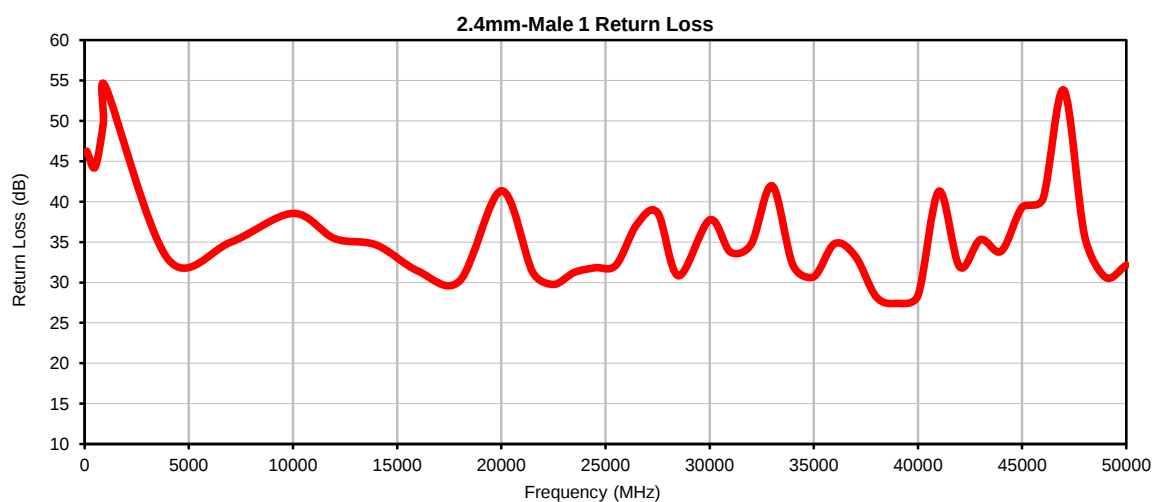
E50-3FT-VMVM+
INSERTION LOSSE50-3FT-VMVM+
RETURN LOSS

REV. OR
M167577
E50-3FT-VMVM+
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180425
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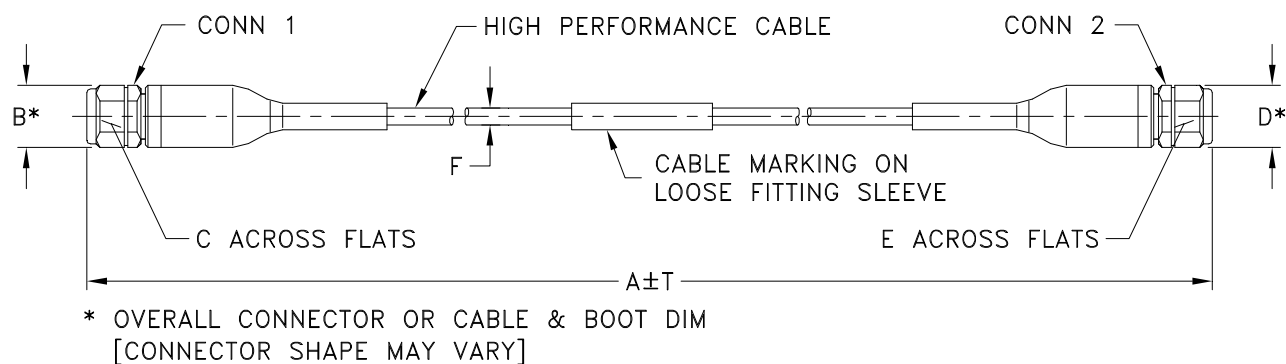
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	2.4mm-MALE 1 RETURN LOSS (dB)	2.4mm-MALE 2 RETURN LOSS (dB)
100	0.19	46.3	44.9
500	0.44	44.3	46.8
900	0.59	49.8	41.9
1000	0.62	54.2	48.7
4000	1.24	32.9	32.2
7000	1.66	35.0	34.5
10000	2.00	38.6	40.2
12000	2.20	35.4	36.5
14000	2.39	34.6	41.4
16000	2.58	31.4	29.6
18000	2.75	30.2	32.6
20000	2.92	41.4	35.5
21500	3.05	31.3	27.3
22500	3.13	29.8	29.8
23500	3.22	31.2	28.7
24500	3.29	31.8	31.2
25500	3.37	32.1	29.4
26500	3.45	37.2	41.9
27500	3.53	38.6	37.8
28500	3.61	30.8	26.4
30000	3.72	37.7	31.6
31000	3.79	33.8	31.3
32000	3.86	34.8	37.2
33000	3.94	42.0	41.3
34000	4.01	32.1	32.7
35000	4.08	30.7	38.9
36000	4.15	34.8	46.7
37000	4.23	33.2	34.1
38000	4.30	28.2	32.4
39000	4.37	27.4	28.0
40000	4.44	28.4	30.2
41000	4.50	41.3	29.9
42000	4.56	31.9	34.0
43000	4.63	35.3	38.0
44000	4.69	33.9	36.6
45000	4.76	39.3	36.4
46000	4.83	40.4	39.5
47000	4.90	53.8	47.4
48000	4.97	35.7	40.2
49000	5.04	30.6	35.2
50000	5.11	32.2	33.7

Typical Performance Curves



Outline Dimensions



RG2513 SERIES

2.4mm MALE (CONN-1)

2.4mm MALE (CONN-2)

CASE STYLE #	A		B	C	D	E	F	T		WEIGHT GRAMS
	FEET	METERS						INCH	MM	
RG2513-2	2.00	.61	.36 (9.25)	.312 (7.93)	.36 (9.25)	.312 (7.93)	.100 (2.54)	+.50/-0	+12.7/-0	36
RG2513-3	3.00	.91						+.72/-0	+18.3/-0	41

Unless otherwise specified dimensions are in inches (mm).

Tolerances: 2Pl. ± .03; 3Pl. ± .015

Note:

1. High Performance very 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	-40° to 70° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 85° C Ambient Environment	Individual Model Data Sheet
Mechanical Flexing	4,000 cycles During each cycle, cable flexed from 90° through 0° to -90° and back with a Radii of 3 inches	---