FLEX TEST™

Test Cable

T50 Series

50Ω DC to 50 GHz



CASE STYLE: RL2527

The Big Deal

- Ultra-wideband, DC-50 GHz
- Good phase stability vs flexure
- Low Insertion Loss

Product Overview

Mini-Circuits' T50-series test cables provide wideband performance for test applications from DC to 50 GHz with low insertion loss and excellent return loss. These cables are specially designed for stability of phase and amplitude versus flexure while offering outstanding durability and reliability. Featuring triple-shielded cable construction with a unique molded boot, the cables are suitable for demanding lab environments where constant bending is required. T50-series cables feature 2.4mm-female to 2.4mm-male connectors and come in a variety of lengths to meet your needs.

Key Features

Feature	Advantages
Wideband, DC to 50 GHz	Supports a wide range of test applications including R&D, military and defense, production test and more.
Excellent stability of phase versus flexure	T50-series test cables have been tested in bend radii as tight as 2.0 inches to ensure minimal change in phase, providing reliable performance in a wide range of configurations.
Low insertion loss	Allows accurate measurement with minimal compensation for the effects of the cable connection.
2.4mm-male to 2.4mm-female connectors	Mates with common connector types for 40 and 50 GHz test applications.

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

FLEX TEST™

Test Cable

T50-2FT-VFVM+

50Ω 2FT DC to 50 GHz Low Loss



CASE STYLE: RL2527-2

Connectors	Model
2.4mm Male - 2.4mm Fem	T50-2FT-VFVM+

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	+18°C to +28°C		
Storage Temperature	-40°C to +50°C		
Power Handling at 25°C, Sea Level	144W	at	2 GHz
	46W	at	18 GHz
	38W	at	26.5 GHz
	30W	at	40 GHz
	25W	at	50 GHz

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

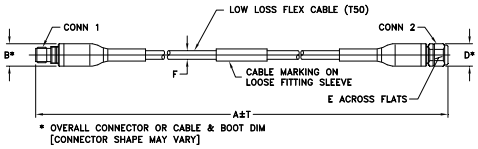
Features

- low insertion loss
- stainless steel 50 GHz connector for long mating-cycle life
- triple shield cable for excellent shielding effectiveness
- good amplitude and phase stability vs flexing over frequency
- 50 GHz connector mates with 2.4 mm

Applications

- military and defense applications
- research & development labs

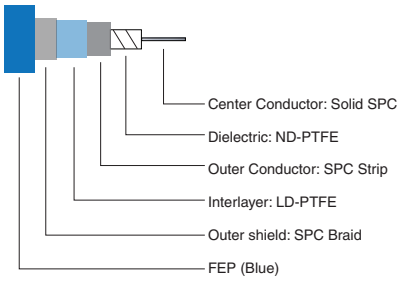
Outline Drawing



Outline Dimensions (inch / mm)

A		B	C	D	E	F	T		wt
Feet	Meters	0.36	--	0.36	.315	.142	Inch	MM	grams
2.00	0.61	9.25	--	9.25	8.00	3.61	+.08/-0	+2.0/-0	47

Cable Construction



Product Guarantee

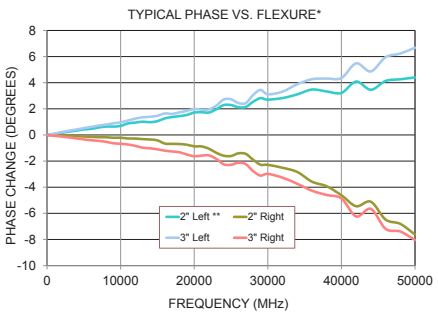
Mini-Circuits® will repair or replace your test cable at its option if the connector attachment fails within six months of shipment. This guarantee excludes cable or connector interface damage from misuse or abuse.

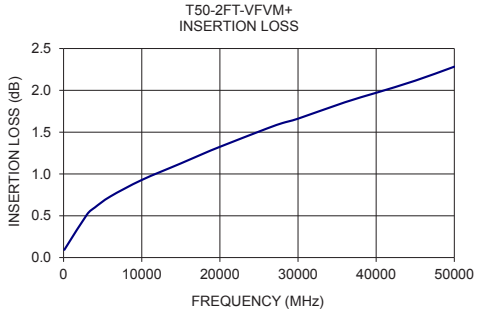
Electrical Specifications at 25°C

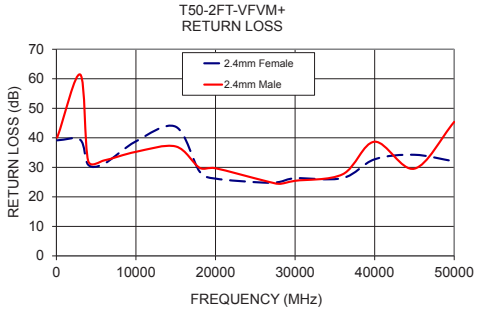
Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		50	GHz
Length			2		FT
Insertion Loss	DC - 18	—	1.4	1.7	dB
	18 - 26.5	—	1.8	2.0	
	26.5 - 40	—	2.2	2.6	
	40 - 50	—	2.7	3.1	
Return Loss	DC - 18	20	24	—	dB
	18 - 26.5	17	20	—	
	26.5 - 40	16	20	—	
	40 - 50	15	19	—	

Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		2.4mm Female	24mm Male
100	0.09	39.2	40.1
3000	0.52	39.3	61.4
4000	0.60	30.9	32.1
6000	0.73	31.2	32.3
10000	0.93	38.8	35.3
15000	1.13	43.8	37.1
18000	1.25	28.6	29.8
20000	1.32	26.2	29.7
26000	1.54	24.8	25.6
28000	1.61	25.0	24.4
30000	1.66	26.3	25.4
36000	1.86	26.4	27.7
40000	1.97	32.7	38.7
45000	2.12	34.3	29.6
50000	2.28	32.0	45.4







* Typical phase change over flexure performed on T50-3FT-VFVM+ by wrapping cable 360° around 2" and 3" radii mandrels referenced to normalized straight position.

** Setup is flipped and measurement is repeated.

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