

TF50-50

DC to 50GHz 50Ω Female Termination

DEVICE OVERVIEW

General Description

The TF50-50 is a well-matched, 50Ω female termination enabling operation from DC to 50 GHz. This termination features a 1W power rating and 31 dB typical return loss. The termination is suitable for use with our connectorized components. The T50-50 is available with both Male and Female connector options available as a 2.4mm connectorized module.



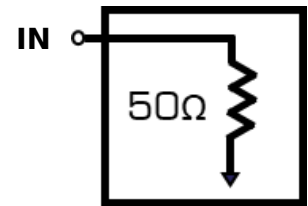
Features

- Female termination
- Broadband 50Ω termination from DC to 50 GHz
- 0.7W Power Rating
- 31 dB typical Return Loss

Applications

- Test Equipment
- Broadband Loading
- Precision Characterization

Functional Block Diagram



Part Ordering Options

Part Number	Description	Connectors	Green Status	Product Lifecycle	Export Classification
TF50-50	DC to 50GHz 50Ω Female Termination	<u>Standard</u>	REACH RoHS	Released	EAR99
<u>TM50-50</u>	DC to 50GHz 50Ω Male Termination	<u>Standard</u>	REACH RoHS	Released	EAR99

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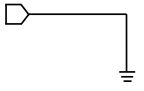
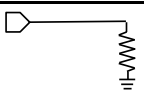
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Revision History

Revision Code	Revision Date	Comment
-	2025-06-13	Initial Release
A	2025-11-24	Power Handling removed from Outline Drawing
B	2026-02-17	Power Handling Updated in the Features Section

Port Configuration and Functions

Port Functions

Port	Function	Connector Type	Description	DC Equivalent Circuit
GND	Ground	-	Ground provided through metal housing and outer coax conductor.	
Port 1	Input	2.4F	Port 1 is DC connected to ground through a broadband 50Ω resistor.	

Specifications

Absolute Maximum Ratings

The Absolute Maximum Ratings indicate limits beyond which damage may occur to the device. If these limits are exceeded, the device may be inoperable or have a reduced lifetime.

Parameter	Maximum Rating	Unit
Average Power Handling ¹	0.7	W
Maximum Operating Temperature	105	°C
Maximum Storage Temperature	105	°C
Minimum Operating Temperature	-40	°C
Minimum Storage Temperature	-40	°C

1 W Average power from -40°C to +70°C Linearly derated to 0.7W at 105°C

[1] 1 W Average power from -40°C to +70°C Linearly derated to 0.7W at 105°C

Package Information

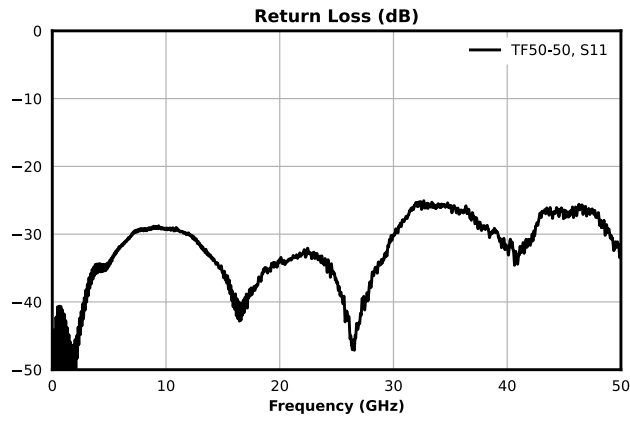
Parameter	Details	Rating
ESD	250 to < 500 Volts	HBM Class 1A

Electrical Specifications

The electrical specifications apply at TA=+25°C in a 50Ω system.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Impedance	Configuration A, 25°C	0	50	-	50	-	Ω
Return Loss	Configuration A, 25°C	0	50	21	31	-	dB
VSWR	Configuration A, 25°C	0	50	-	1.06	1.15	

Typical Performance Plots

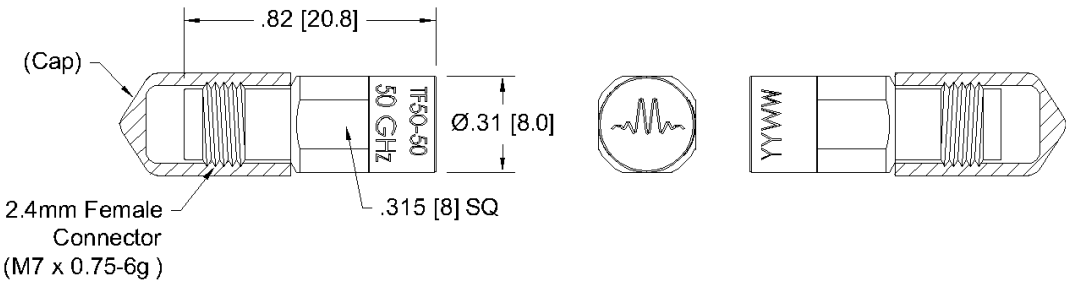


Mechanical Data

Outline Drawing

Download : [Outline 2D Drawing](#)

REVISIONS				
ECN	REV.	DESCRIPTION	DATE	APPROVALS
	B	ECN 209-10-23-2025	11/6/25	AT



(Cap)

.82 [20.8]

2.4mm Female Connector (M7 x 0.75-6g)


TF50-50
50 GHz

Ø.31 [8.0]

.315 [8] SQ

NOTES: Unless Otherwise Specified

1. All Dimensions are in Inches [Metric].

<small>JUL 2009 OF THE W. 82 99 50 TF 50 S. W. 100 043 732 1 10 029 T. W. 200 000 000</small>		 <small>www.markimicrowave.com</small>	
MATERIAL:		DRAWN BY:	DATE:
FINISH:		TNN	01-06-2025
		WV	3/24/25
<small>DO NOT SCALE DRAWING</small>		SIZE:	A
		CAGE CODE:	0UC32
		DWG. NO.:	TF50-50
		SCALE:	NOTE:
		SHEET 1 OF 1	

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