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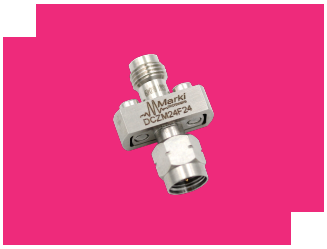
DCZM24F24

DC-Block

DEVICE OVERVIEW

General Description

These DC blocks feature resonance-free operation and provide superior return loss and insertion loss across very broad bandwidths.



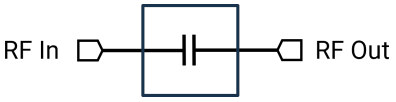
Features

- 4kHz to 50GHz Operation
- 2.4mm Connectors
- Non-Resonant
- Low Insertion Loss
- Convenient easy-grip jacket for effortless loosening

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Connectors	Green Status	Product Lifecycle	Export Classification
DCZM24F24	DC-Block	-	Consult Factory	Released	EAR99
DCZM24M24	DC-Block	Standard	Consult Factory	Released	EAR99
DCZF24F24	DC-Block	Standard	Consult Factory	Released	EAR99

Table Of Contents

Revision History

Revision Code	Revision Date	Comment
-	2023-06-13	Initial Release

Port Configuration and Functions

Port Functions

Port	Function	Connector Type	Description	Equivalent Circuit for Package
In/Out 1	Input/Output	2.4M	RF Input/Output port 1 of the device. Device is passive and reciprocal from port 1 to port 2. Ground is not isolated between ports 1 and 2.	-
In/Out 2	Input/Output	2.4F	RF Input/Output port 2 of the device. Device is passive and reciprocal from port 1 to port 2. Ground is not isolated between ports 1 and 2.	-

Specifications

Absolute Maximum Ratings

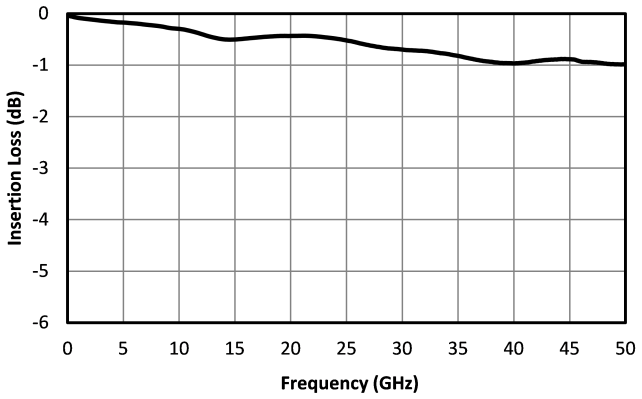
Parameter	Maximum Rating	Unit
DC Voltage	16	V
RF Power Handling, Average	1	W

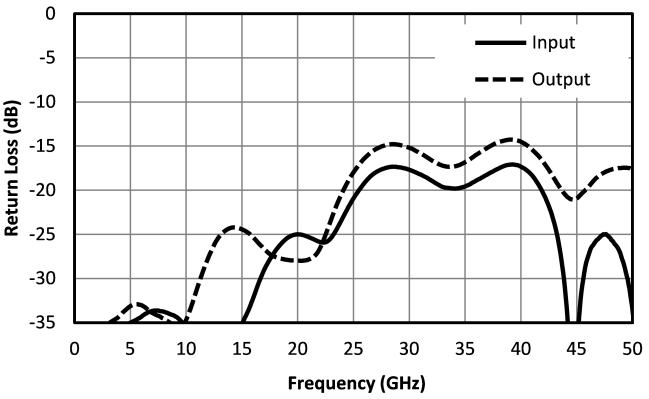
Electrical Specifications

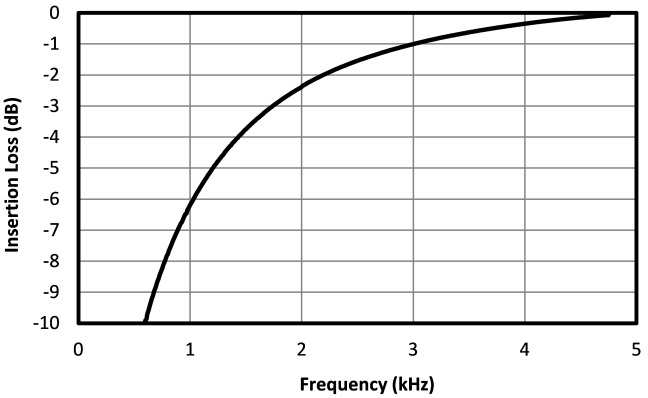
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Capacitance	-	0.000004	50	-	1	-	µF
Group Delay	-	0.000004	50	-	75	-	ps
Insertion Loss	-	0.000004	50	-	0.7	1.25	dB
Near DC Insertion Loss	-	0.000002	0.000002	-	3	-	dB
Rise Time [1]	-	0.000004	50	-	6	-	ps
VSWR	-	0.000004	50	-	1.4	-	-

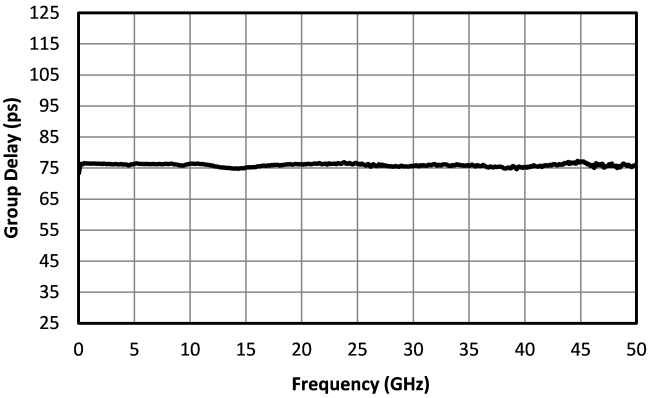
[1] Specified as 90%/10%. Calculated from $\tau\_balun^2 = (\tau\_out^2 - \tau\_in^2)$ with a 10 Gb/s input pattern.

Typical Performance Plots



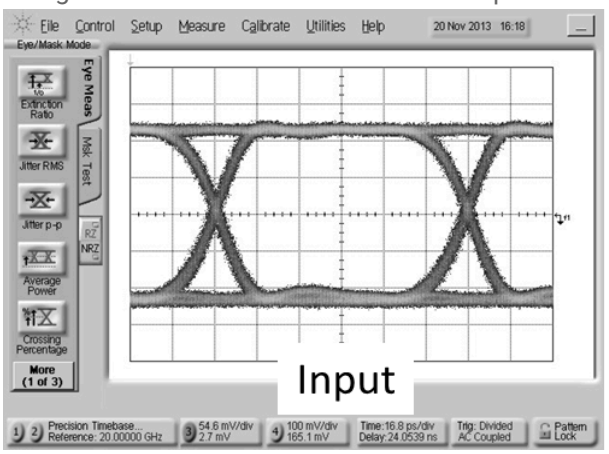


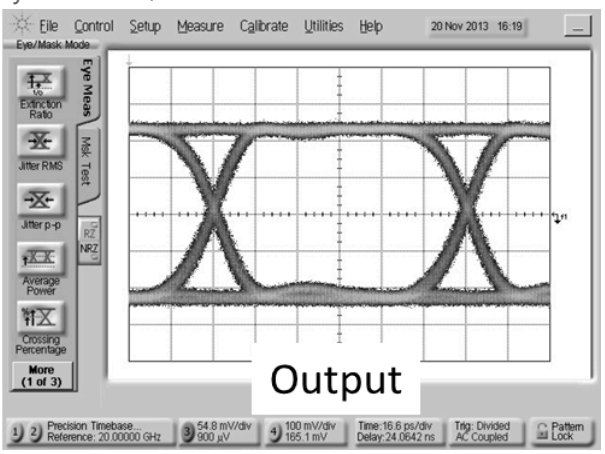




Oscilloscope measurements of the DC block with a 10 Gb/s PRBS pattern.

Eye diagrams are taken with a 2^{31}-1 P PRBS input demonstrating minimal eye distortion/closure.

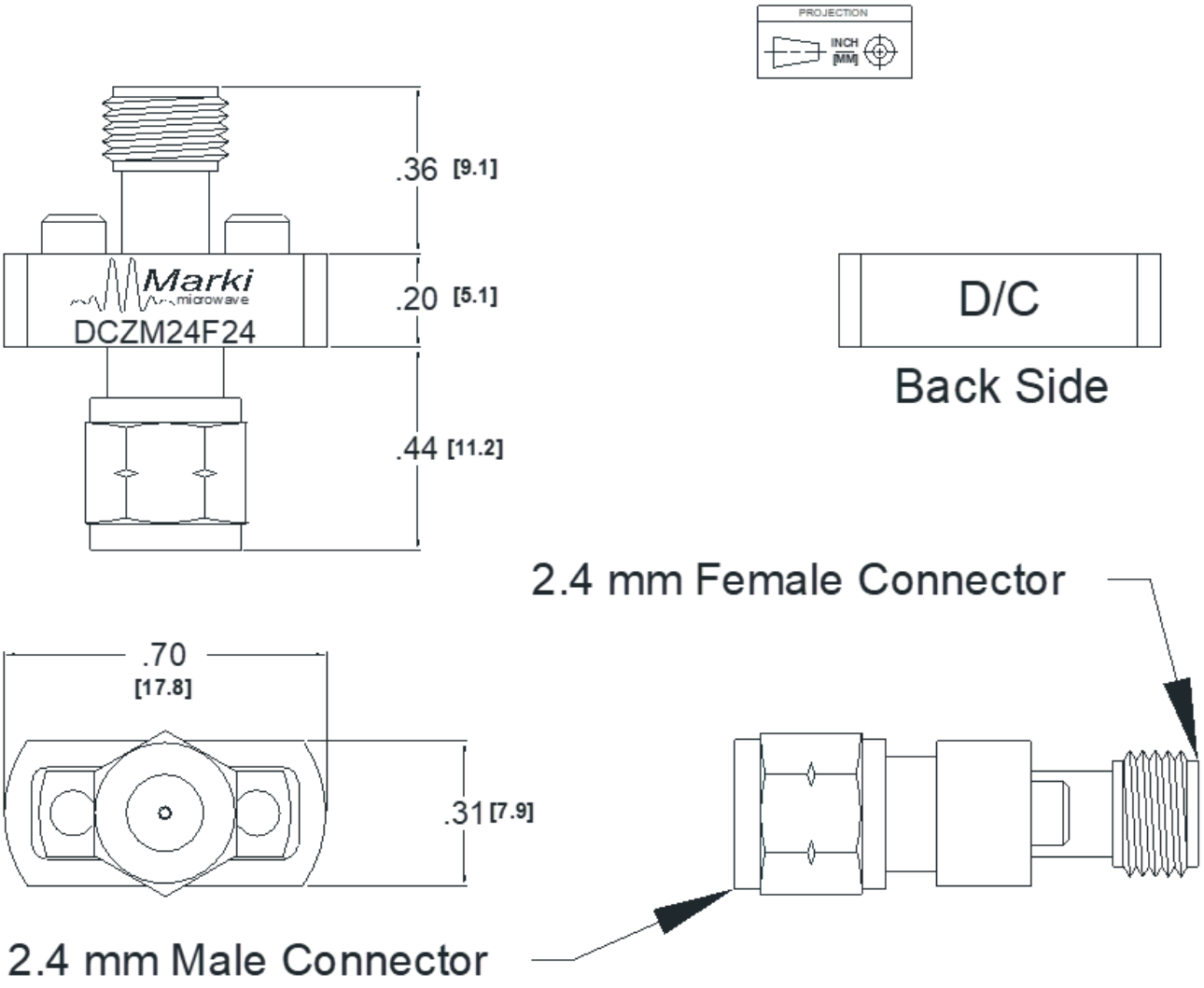




Mechanical Data

Outline Drawing

Download : Outline 2D Drawing



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