

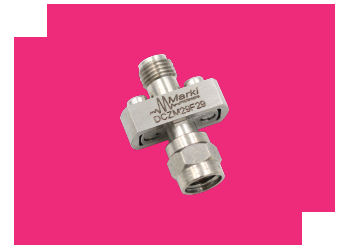
DCZM29F29

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.



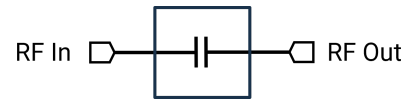
Features

- 4kHz to 40GHz Operation
- 2.92mm 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	Package	Connectors	Green Status	Product Lifecycle	Export Classification
<u>DCZF29F29</u>	DC-Block	K	<u>Standard</u>	<u>Consult Factory</u>	Released	EAR99
DCZM29F29	DC-Block	K	-	Non-RoHS	Released	EAR99
<u>DCZM29M29</u>	DC-Block	K	-	<u>Consult Factory</u>	Released	EAR99

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Revision History

Revision Code	Revision Date	Comment
-	2014-04-04	Initial Release

Port Configuration and Functions

Port Functions

Port	Function	Connector Type	Description	Equivalent Circuit for Package
In/Out 1	Input/Output	2.92M	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	2.92F	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

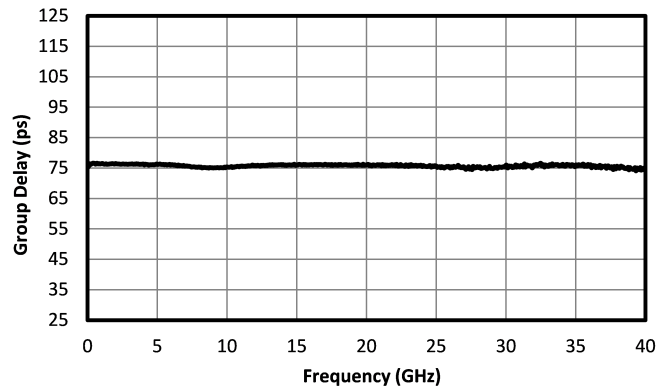
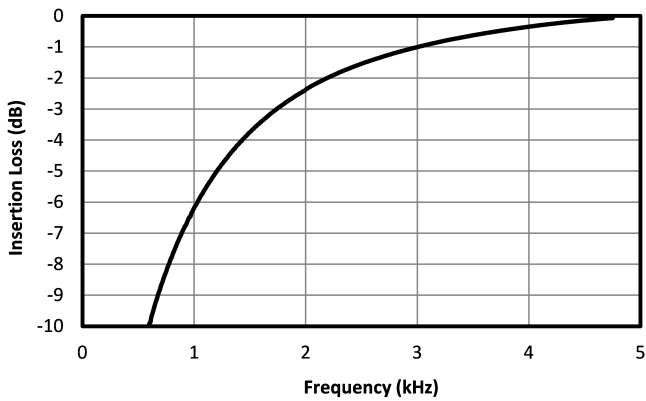
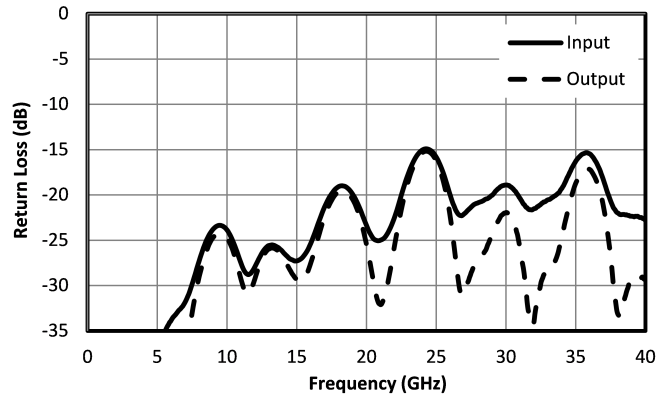
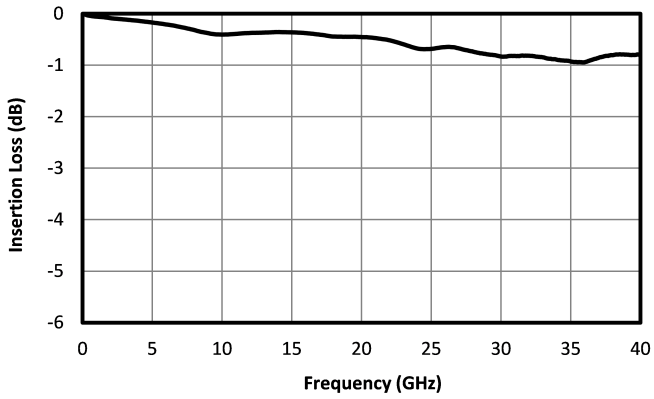
Parameter	Maximum Rating	Unit
DC Voltage	16	V
RF Power Handling , Average	1	W

Electrical Specifications

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Capacitance	-	0.000004	40	-	1	-	μF
Group Delay	-	0.000004	40	-	75	-	ps
Insertion Loss	-	0.000004	40	-	0.7	1.4	dB
Near DC Insertion Loss	-	0.000002	0.000002	-	3	-	dB
Rise Time ¹	-	0.000004	40	-	6	-	ps
VSWR	-	0.000004	40	-	1.4	-	-

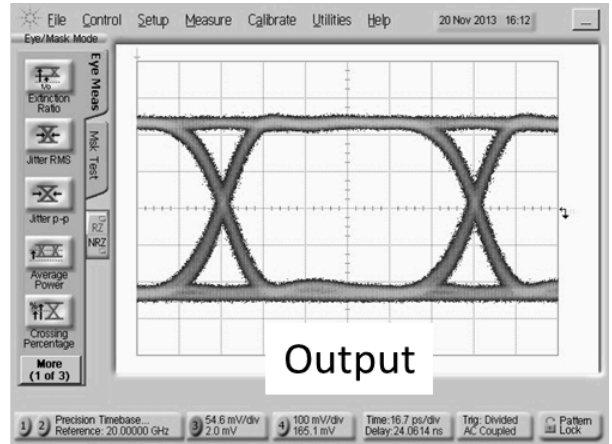
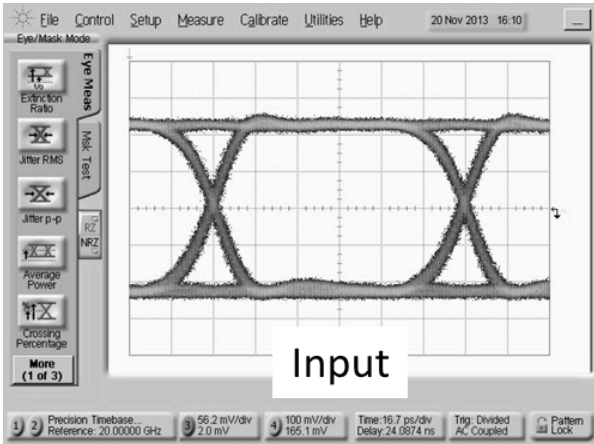
^[1] Specified as 90%/10%. Calculated from $\tau_{balun}^2 = (\tau_{out}^2 - \tau_{in}^2)$ with a 10 Gb/s input pattern.

Typical Performance Plots



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

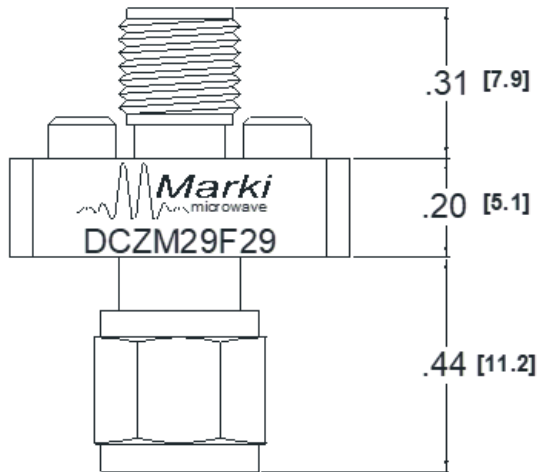
Eye diagrams are taken with a $2^{31}-1$ P PRBS input demonstrating minimal eye distortion/closure.



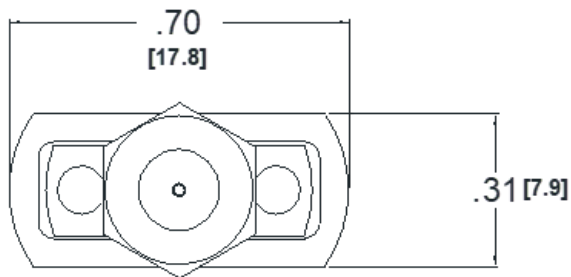
Mechanical Data

Outline Drawing

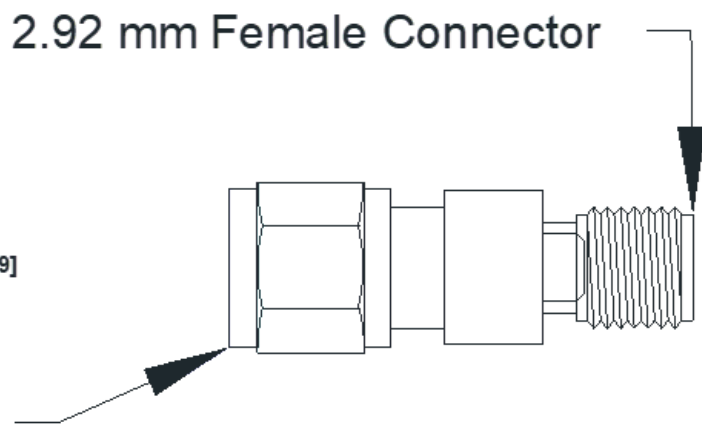
Download : [Outline 2D Drawing](#)



Back Side



2.92 mm Male Connector



2.92 mm Female Connector

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