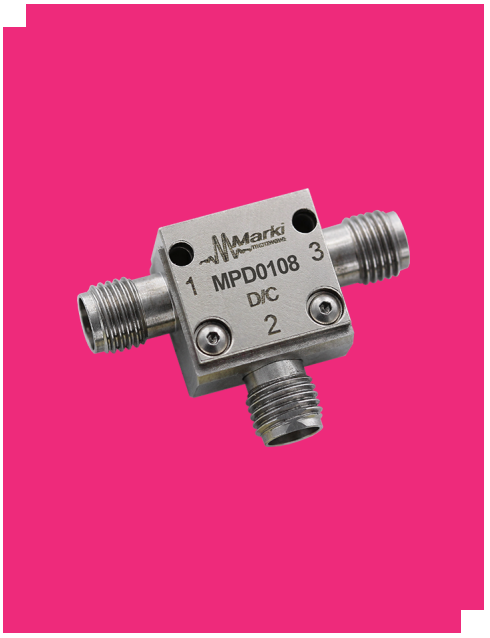
Sales: 408-778-9952 | General: 408-778-4200 | Fax: 408-778-4300
Sales & Customer Support: sales@markimicrowave.com
Tech Support: support@markimicrowave.com

MPD-0108BH

General Description

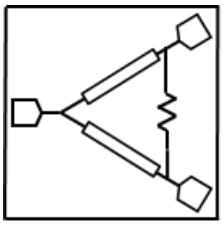
The MPD-0108BH is a 2-way Wilkinson power divider/combiner covering 1 to 8 GHz, designed using passive GaAs MMIC technology for consistent performance across a multi-octave frequency range. It delivers 1.1 dB excess insertion loss and 23 dB isolation between outputs across the full band. The device also maintains tight 0.1 dB amplitude balance and 0.8º phase balance with excellent match on all ports. For accurate simulations, use the provided S3P file taken from measured production units. The MPD-0108BH is packaged in a small form-factor 1.1 x 0.8 inch high-performance connectorized housing for easy integration into test setups and system signal paths.



Features

- 2-way Splitter or Combiner
- Excess Insertion Loss, 1.1 dB Typical
- Isolation, 23 dB Typical
- Amplitude Balance, 0.1 dB Typical
- Phase Balance, 0.8° Typical
- Compact 1.1 x 0.8 Inch, 3-Port Connectorized Package

Functional Block Diagram



Electrical Performance Summary

Parameter	Typ	Unit
Frequency Range	1 to 8	GHz
Phase Balance	0.76	°
Excess Insertion Loss	1.1	dB
No. Ways	Wilkinson 1:2	-
RF Power Handling as a Power Divider	10	W
Amplitude Balance	0.1	dB
Isolation	23	dB

Summary only – refer to the Electrical Specifications, Absolute Maximum Ratings, and Recommended Operating Range tables for complete details.

Part Ordering Options

Part Number	Description	Package	Connectors	Green Status	Product Lifecycle	Export Classification
MPD-0108BH	1 - 8 GHz MMIC 2-Way Wilkinson Power Divider/Power Splitter	BH	-	REACH RoHS	Released	EAR99

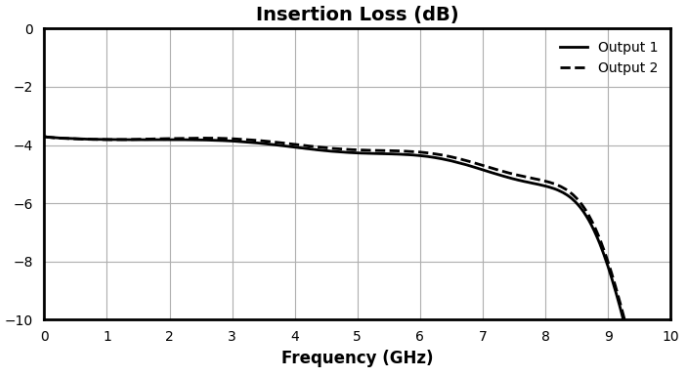
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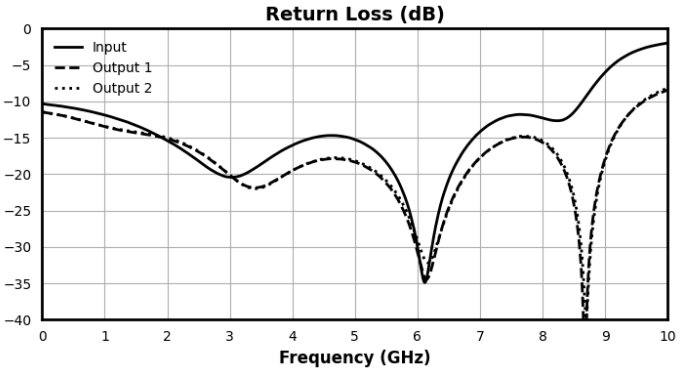
Table Of Contents

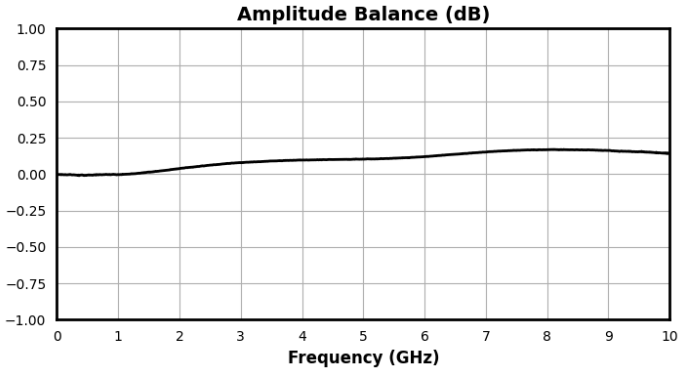
- **Device Overview**
  - General Description
  - Features
  - Functional Block Diagram
  - Electrical Performance Summary
  - Part Ordering Options
- **Specifications**
  - Typical Performance Plots
  - Electrical Specifications
  - Absolute Maximum Ratings
  - Package Information
- **Port Configuration and Functions**
  - Port Diagram
  - Port Functions
- **Mechanical Data**
  - Outline Drawing
- **Revision History**

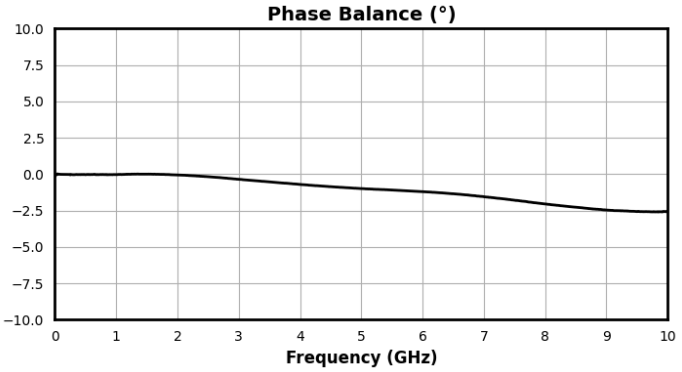
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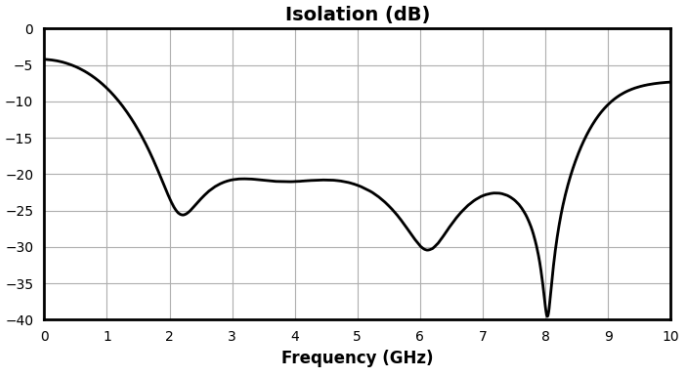
Typical Performance Plots











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SPECIFICATIONS

Electrical Specifications

The electrical specifications apply at TA=+25°C in a 50Ω system. Min and Max limits are guaranteed at TA=+25°C.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Frequency Range	-	1	8	-	-	-	GHz
Excess Insertion Loss [1]	-	1	8	-	1.1	-	dB
Amplitude Balance	-	1	8	-	0.1	-	dB
Nominal Power Splitting	-	1	8	-	3	-	dB
Phase Balance	-	1	8	-	0.76	-	°
Nominal Phase Shift	-	1	8	-	0	-	°
Isolation	-	1	2	-	14	-	dB
Isolation	-	2	8	-	23	-	dB
Common Port Return Loss	-	1	8	-	22	-	dB
Output Return Loss	-	1	8	-	19	-	dB
Impedance	-	-	-	-	50	-	Ω

[1] Excess Insertion Loss is loss in addition to power splitting loss, calculated as (Common Port to Output Port Insertion Loss) – (Power splitting loss of 3 dB)

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
DC Current	40	mA
Maximum Operating Temperature	100	°C
Maximum Storage Temperature	125	°C
Minimum Operating Temperature	-55	°C
Minimum Storage Temperature	-65	°C
RF Power Handling as a Power Combiner	1	W
RF Power Handling as a Power Divider	10	W

Package Information

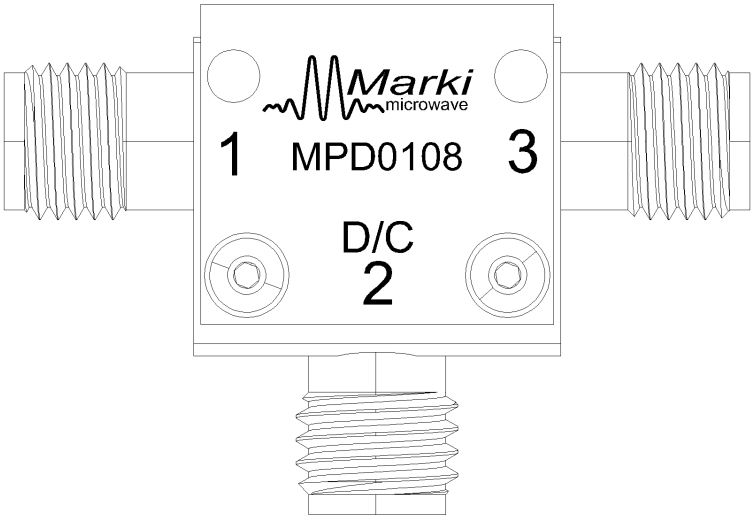
Parameter	Details	Rating
ESD	250 to < 500 Volts	HBM Class 1A
Weight	Package name: BH	12.2g
Dimensions	-	29.01 x 19.84 mm

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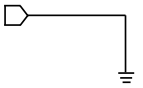
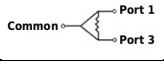
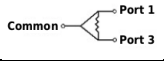
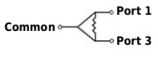
PORT CONFIGURATION AND FUNCTIONS

Port Diagram

A top-down view of the MPD-0108BH package outline drawing is shown below. The MMIC Power dividers are passive reciprocal devices allowing either power splitting or power combining.



Port Functions

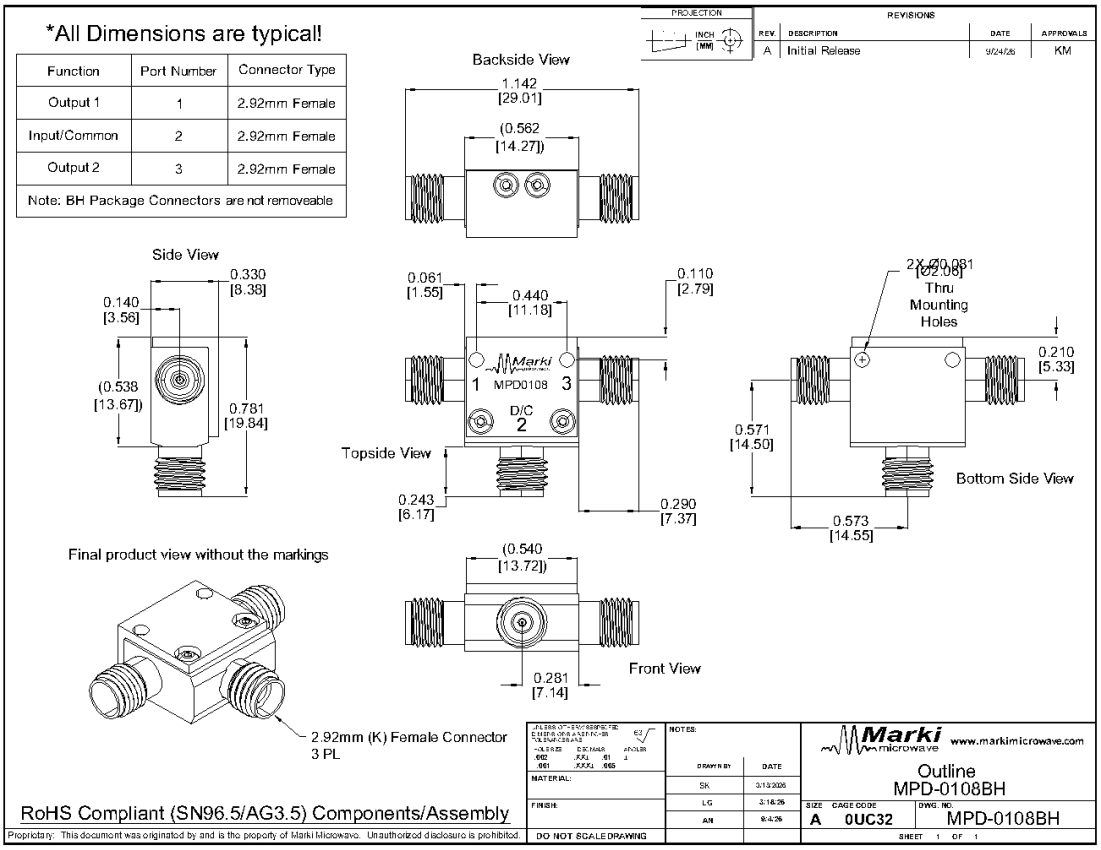
Port	Function	Connector Type	Description	DC Equivalent Circuit
GND	Ground	-	BH package ground provided through metal housing and outer coax conductor.	
Port 1	Output 1	2.92F	The output 1 port is DC short to the other two ports and open to ground.	
Port 2	Input/Common	2.92F	The common port is DC short to the other two ports and open to ground.	
Port 3	Output 2	2.92F	The output 2 port is DC short to the other two ports and open to ground.	

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MECHANICAL DATA

Outline Drawing

Download : Outline 2D Drawing



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REVISION HISTORY

Revision Code	Revision Date	Comment
-	2026-11-10	Initial Release

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