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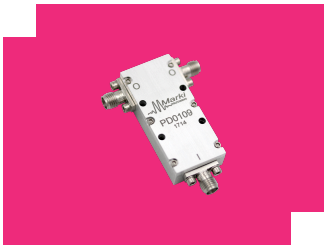
PD-0109

Wilkinson Power Divider

DEVICE OVERVIEW

General Description

2-Way Wilkinson power dividers can be used for both in-phase power splitting and power combining applications. These power dividers feature the lowest insertion loss (ideally 3 dB splitting loss), excellent amplitude and phase balance, and high isolation across the entire operating band. High isolation can be critically important for power combining applications, such as when performing accurate intermodulation distortion (IMD) tests.



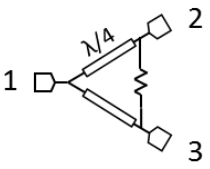
Features

- 1 to 9 GHz In-phase Power Splitting
- 22 dB Typical Output to Output Isolation
- Outstanding Phase and Amplitude Balance

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Connectors	Green Status	Product Lifecycle	Export Classification
PD-0109	Wilkinson Power Divider	Standard	REACH RoHS	Released	EAR99

Table Of Contents

Revision History

Revision Code	Revision Date	Comment
-	2018-11-27	Initial Release
A	2025-12-17	Power Handling Updated

Port Configuration and Functions

Port Functions

Port	Function	Connector Type	Description	DC Equivalent Circuit
In	Divider Common Input	SMAF	Wilkinson divider common input port.	-
Out 1	Divider Output 1	SMAF	RF divided output 1 of the Wilkinson divider.	-
Out 2	Divider Output 2	SMAF	RF divided output 2 of the Wilkinson divider.	-

Specifications

Absolute Maximum Ratings

Parameter	Maximum Rating	Unit
RF Power Handling as a Power Combiner	1	W
RF Power Handling as a Power Divider	10	W

Package Information

Parameter	Details	Rating
Weight	-	60g
Dimensions	-	20.32 × 45.72 mm

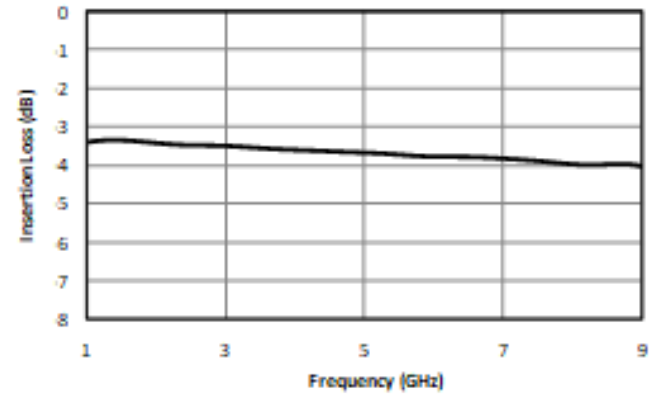
Electrical Specifications

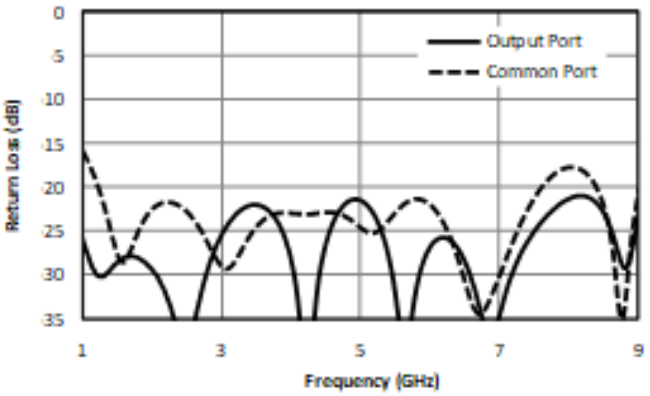
Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

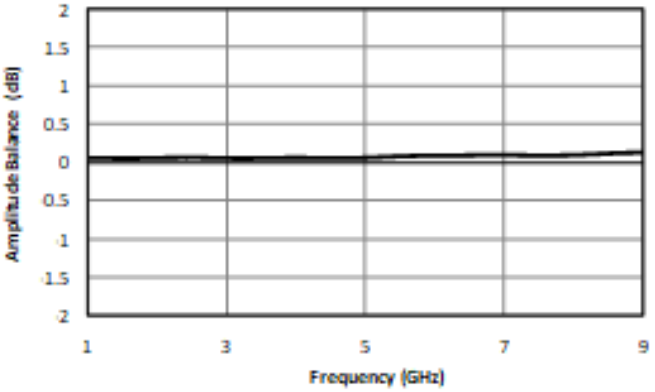
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Amplitude Balance	-	1	9	-	0.1	0.5	dB
Excess Insertion Loss [1]	-	1	9	-	0.75	1.5	dB
Isolation	-	1	9	15	22	-	dB
Nominal Phase Shift	-	1	9	-	0	-	°
Nominal Power Splitting	-	1	9	-	3	-	dB
Phase Balance	-	1	9	-	1	5	dB
VSWR	-	1	9	-	1.2	1.5	

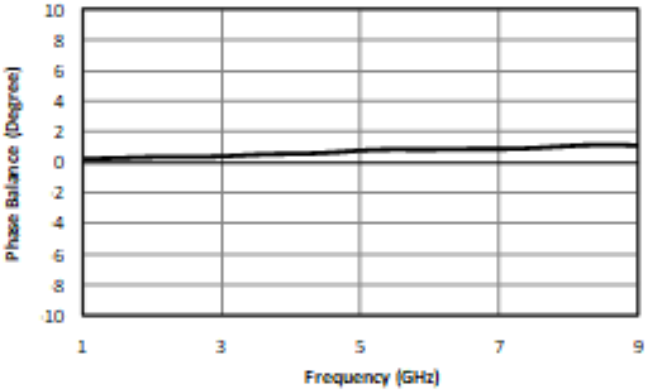
[1] Excess Insertion Loss = (Input Port to Common Port Insertion Loss) - 3dB

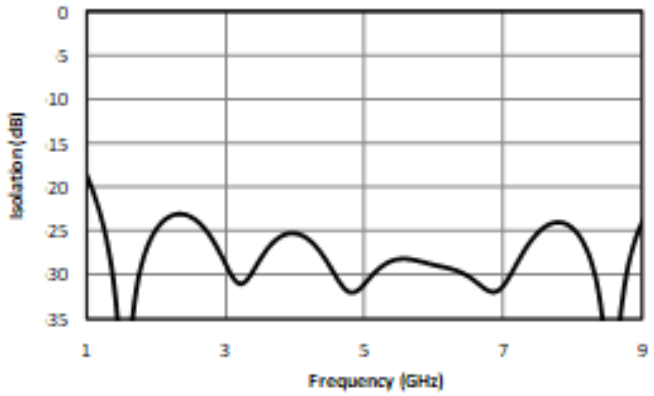
Typical Performance







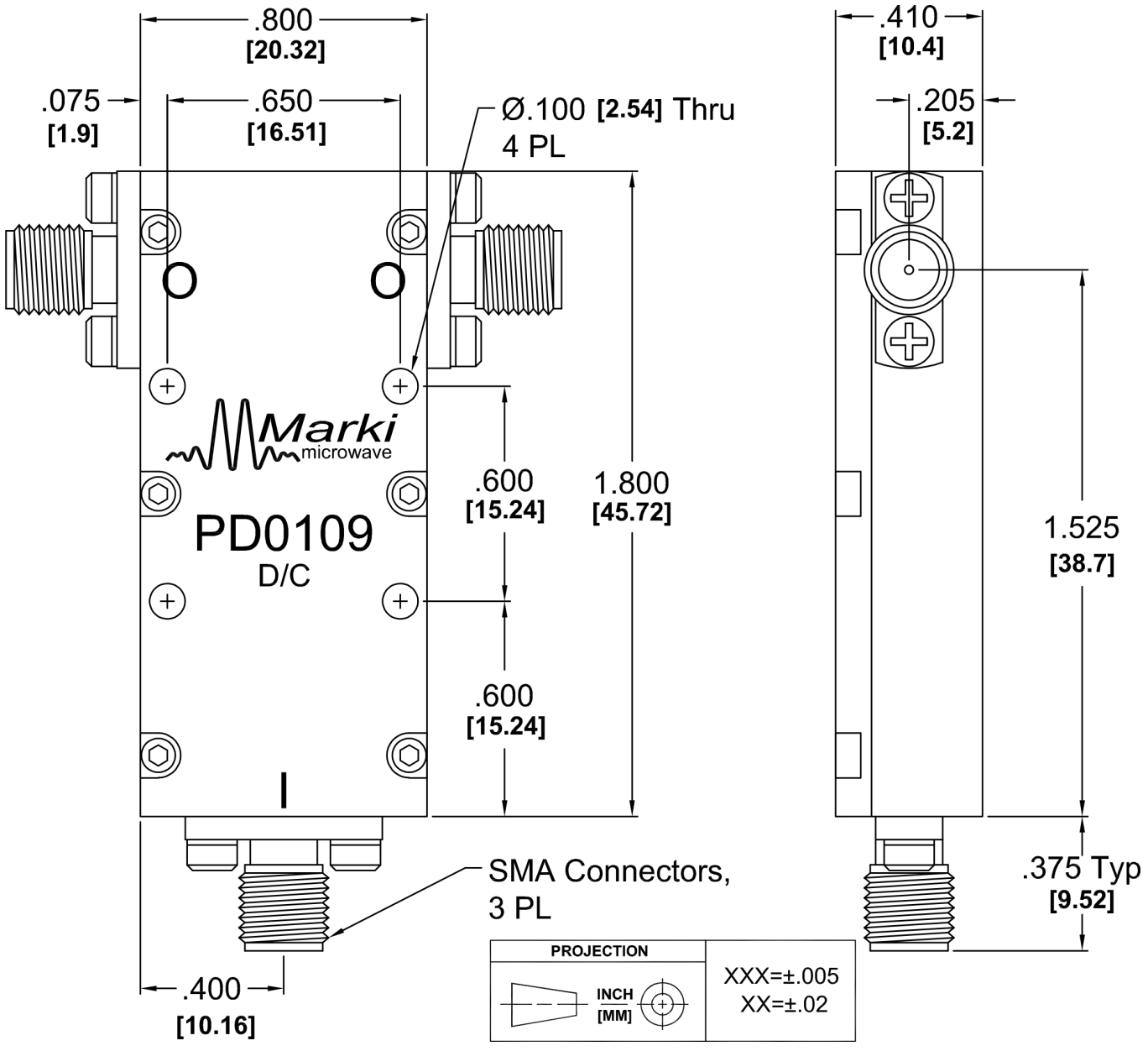




Mechanical Data

Outline Drawing

Download : Outline 2D Drawing | Outline 3D Drawing | Outline 3D STP



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