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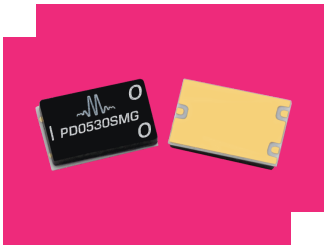
PDN-0530SMG-01

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.



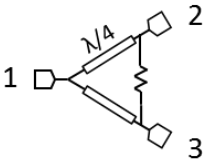
Features

- 5 to 30 GHz In Phase Power Splitting
- 1.5 dB Typical Insertion Loss
- 25 dB Typical Output to Output Isolation
- Surface Mount Package

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
PDN-0530SMG-01	Wilkinson Power Divider	SMG	REACH RoHS	Released	EAR99

Table Of Contents

Revision History

Revision Code	Revision Date	Comment
PRE	2023-12-04	Datasheet Pre-Release

Specifications

Absolute Maximum Ratings

Parameter	Maximum Rating	Unit
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
Dimensions	-	3.81 x 6.10 mm
Moisture Sensitivity Level	-	MSL 3

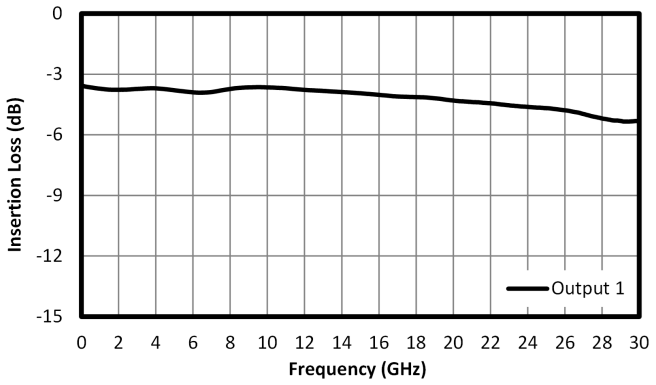
Electrical Specifications

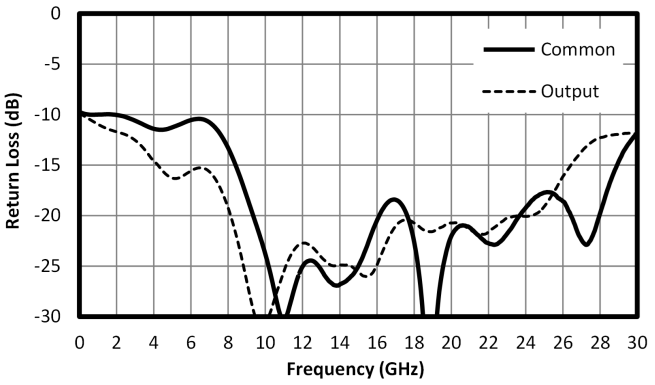
The electrical specifications apply at TA=+25°C in a 50Ω system. Min and Max limits are guaranteed between TA=-50°C and TA=+100°C

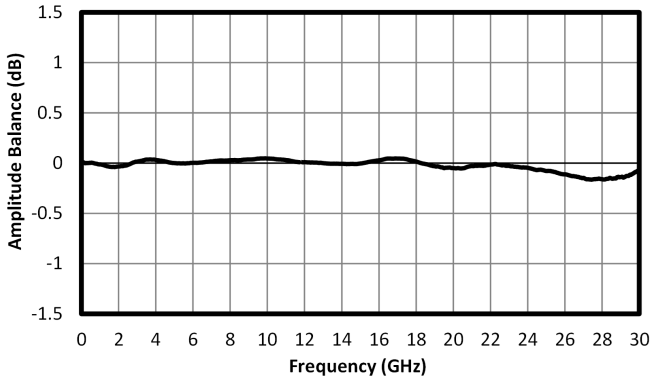
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Amplitude Balance	-	5	30	-	0.01	1.3	dB
Insertion Loss [1]	-	3	3	-	-	5	dB
Insertion Loss [2]	-	11.75	11.75	-	-	5.1	dB
Insertion Loss [3]	-	5	30	-	1.5	7.2	dB
Isolation	-	5	30	11	25	-	dB
Isolation [4]	-	3	3	7	-	-	dB
Nominal Phase Shift	-	5	30	-	0	-	°
Nominal Power Splitting (dB)	-	5	30	-	3	-	dB
Phase Balance	-	5	30	-	2	9	°
VSWR	-	5	30	-	1.4	-	

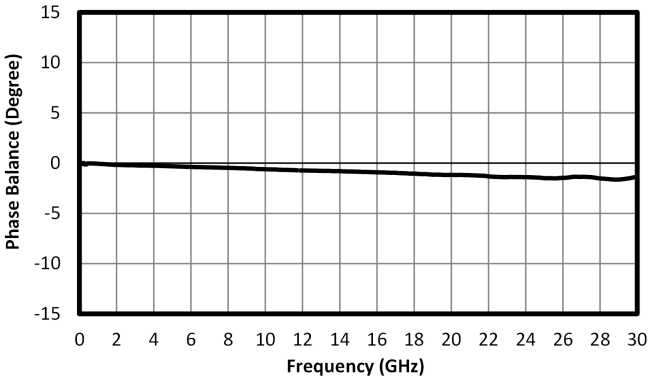
[1] Excess Insertion Loss = (Input Port to Common Port Insertion Loss) - 3dB; Part specified from 5GHz to 30GHz. 3GHz is out of guaranteed specifications.
[2][3] Excess Insertion Loss = (Input Port to Common Port Insertion Loss) - 3dB
[4] Part specified from 5GHz to 30GHz. 3GHz is out of guaranteed specifications.

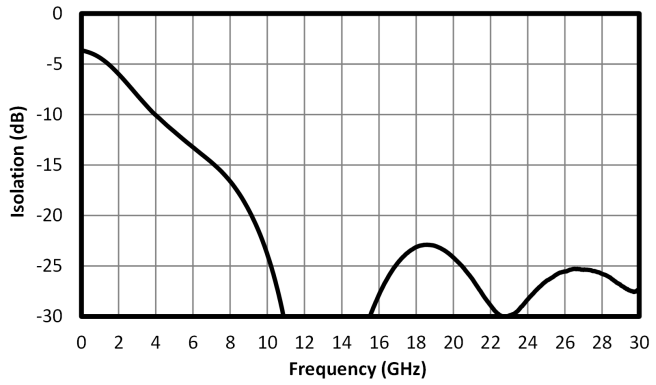
Typical Performance



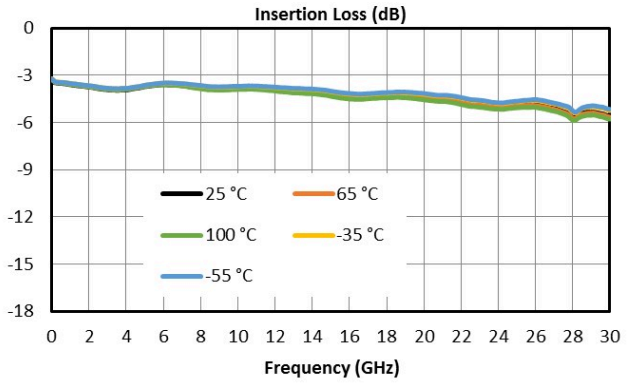


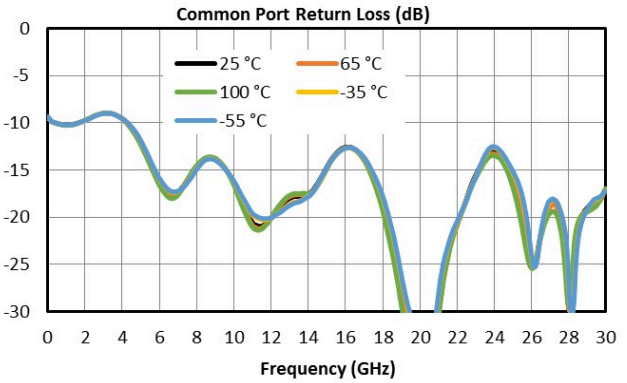


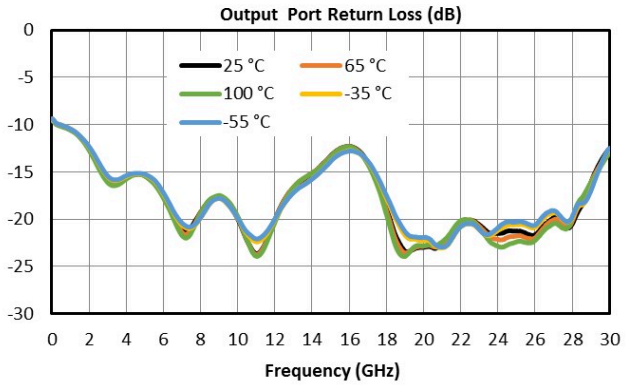


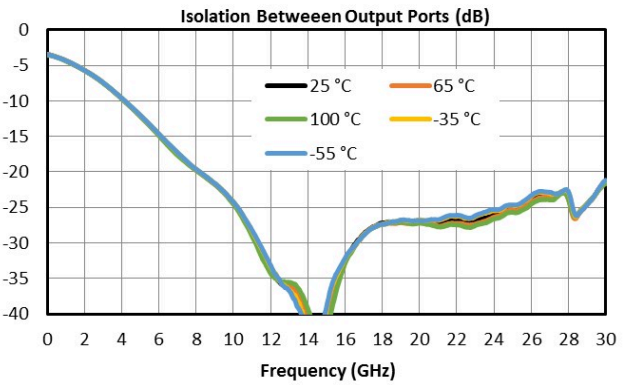


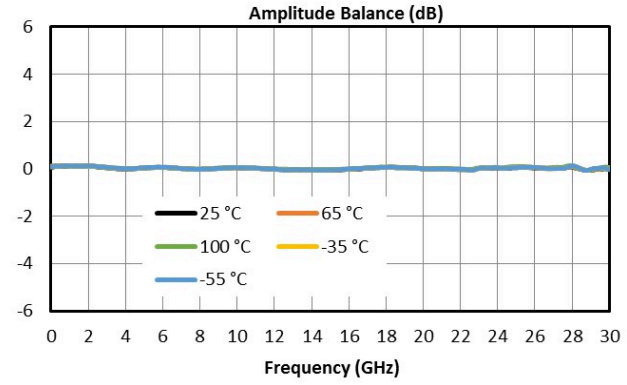
Typical Performance Over Temperature

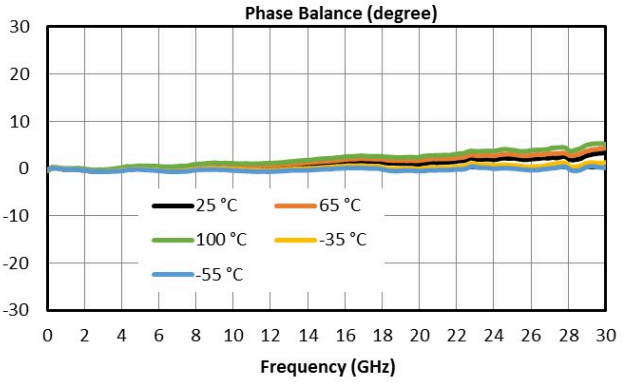








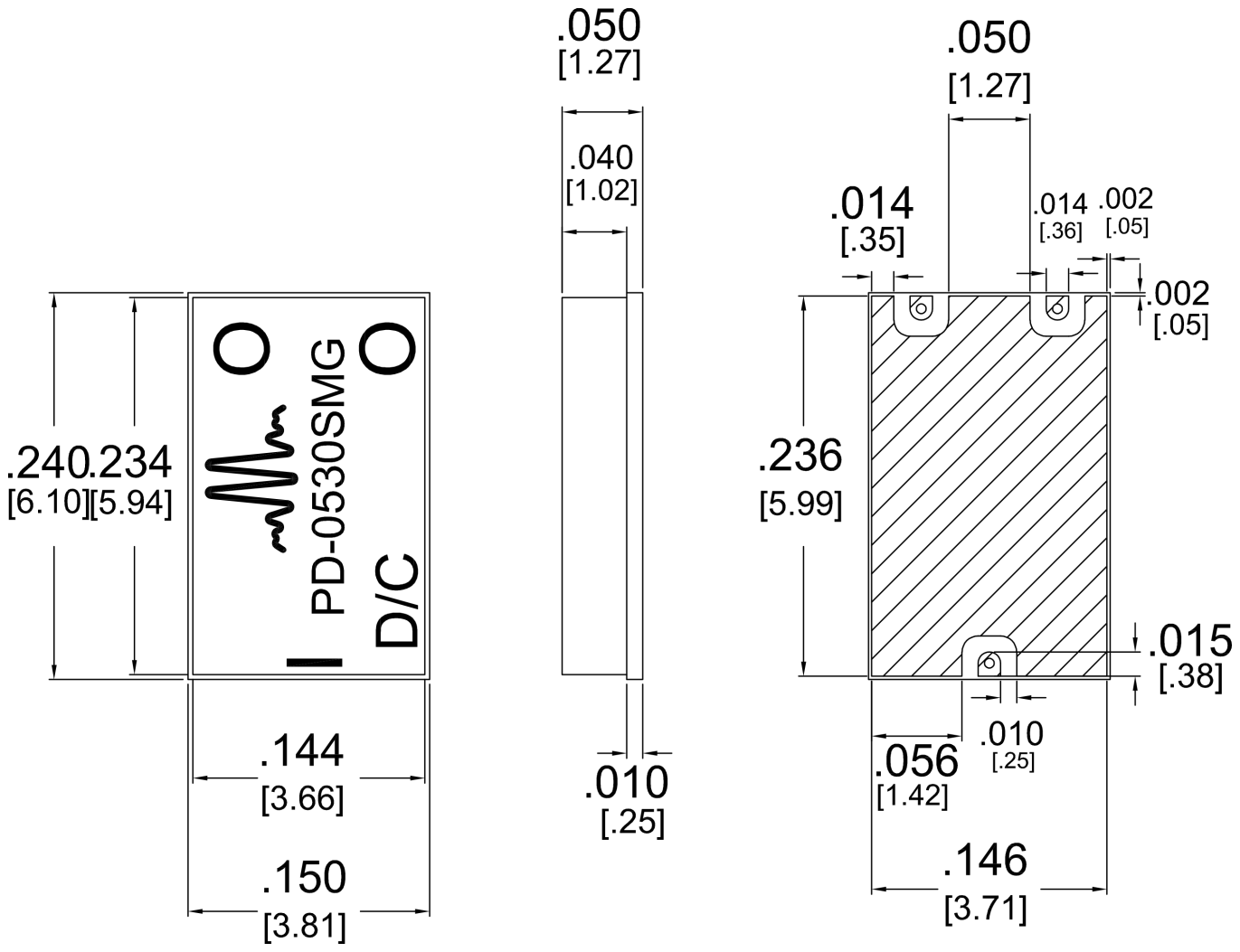




Mechanical Data

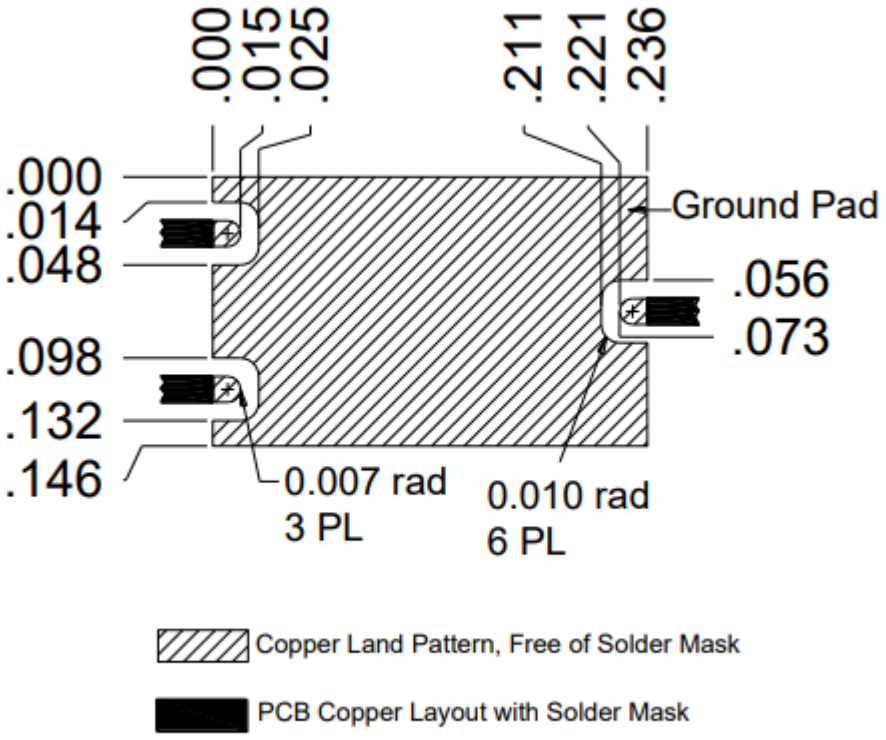
Outline Drawing

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



Footprint Image

Download : Footprint Drawing



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