

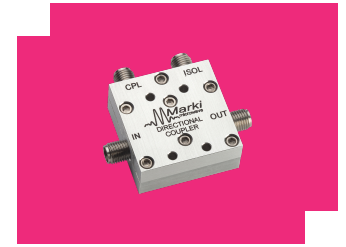
CA-50

Air-Line Directional Coupler

DEVICE OVERVIEW

General Description

The CA-50 is a low loss directional coupler capable of operation to 50 GHz. This coupler features a unique air-line construction that simultaneously enables extremely low loss, minimal return loss, and outstanding directivity throughout the entire frequency range to 50 GHz. This coupler can be used for low loss and high power applications. The useable operating frequencies extend below 1 GHz for applications where calibration of the frequency response is available.



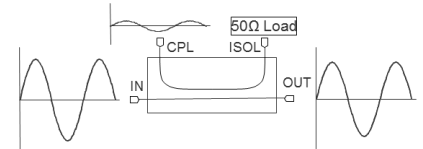
Features

- Low Insertion Loss and VSWR
- Broadband Performance
- High Directivity
- Compact Size and Lightweight

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Connectors	Green Status	Product Lifecycle	Export Classification
CA-50	Air-Line Directional Coupler	<u>Standard</u>	REACH RoHS	Released	EAR99

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Revision History

Revision Code	Revision Date	Comment
-	2012-08-30	Datasheet Initial Release

Specifications

Absolute Maximum Ratings

Parameter	Maximum Rating	Unit
RF Power Handling	15	W

Package Information

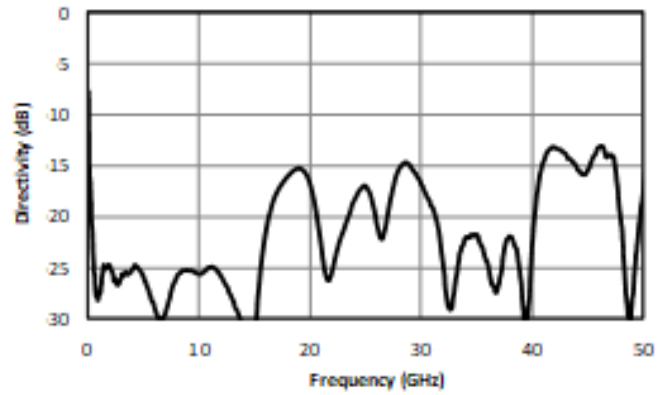
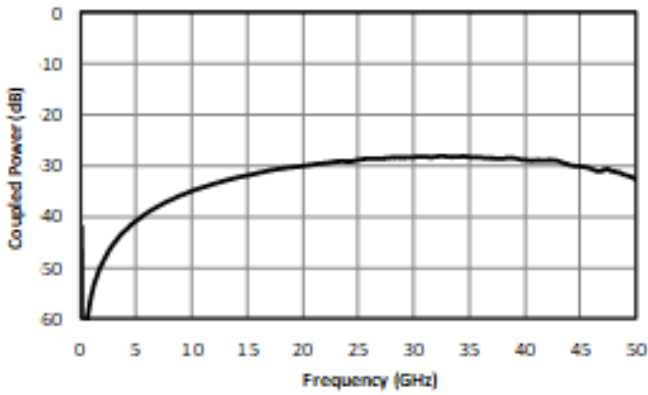
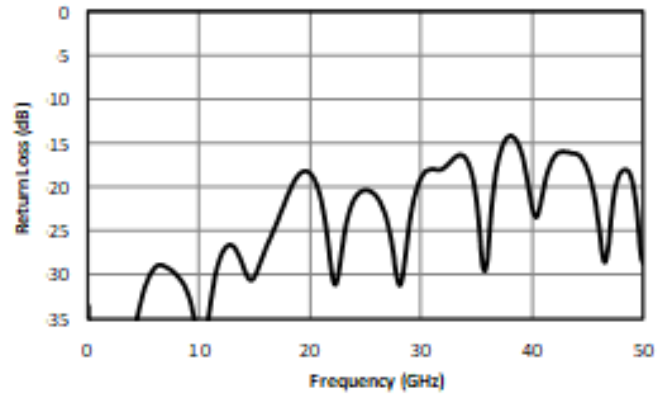
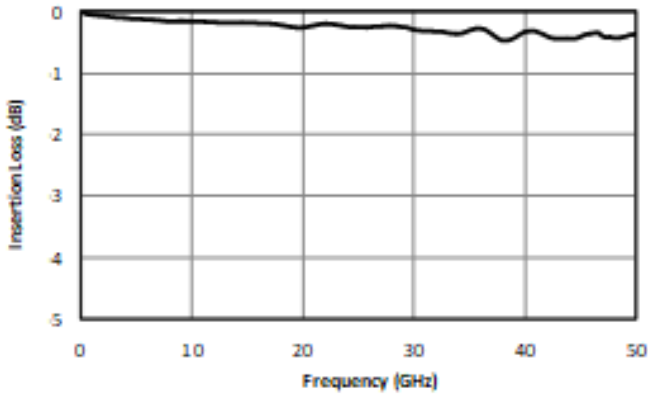
Parameter	Details	Rating
Weight	-	36g
Dimensions	-	30.48 x 30.48 mm

Electrical Specifications

Specifications guaranteed when operated in a 50Ω system

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Directivity	-	1	15	18	24	-	dB
Directivity	-	15	50	12	15	-	dB
Direct Line Insertion Loss	DC-30	-	-	-	0.3	0.6	dB
Direct Line Insertion Loss	-	30	50	-	0.5	1	dB
Mean Coupling	-	15	40	33	27	25	dB
Mean Coupling	-	1	-	-	53	-	dB
VSWR	-	1	18	-	1.1	1.4	
VSWR	-	18	50	-	1.45	-	

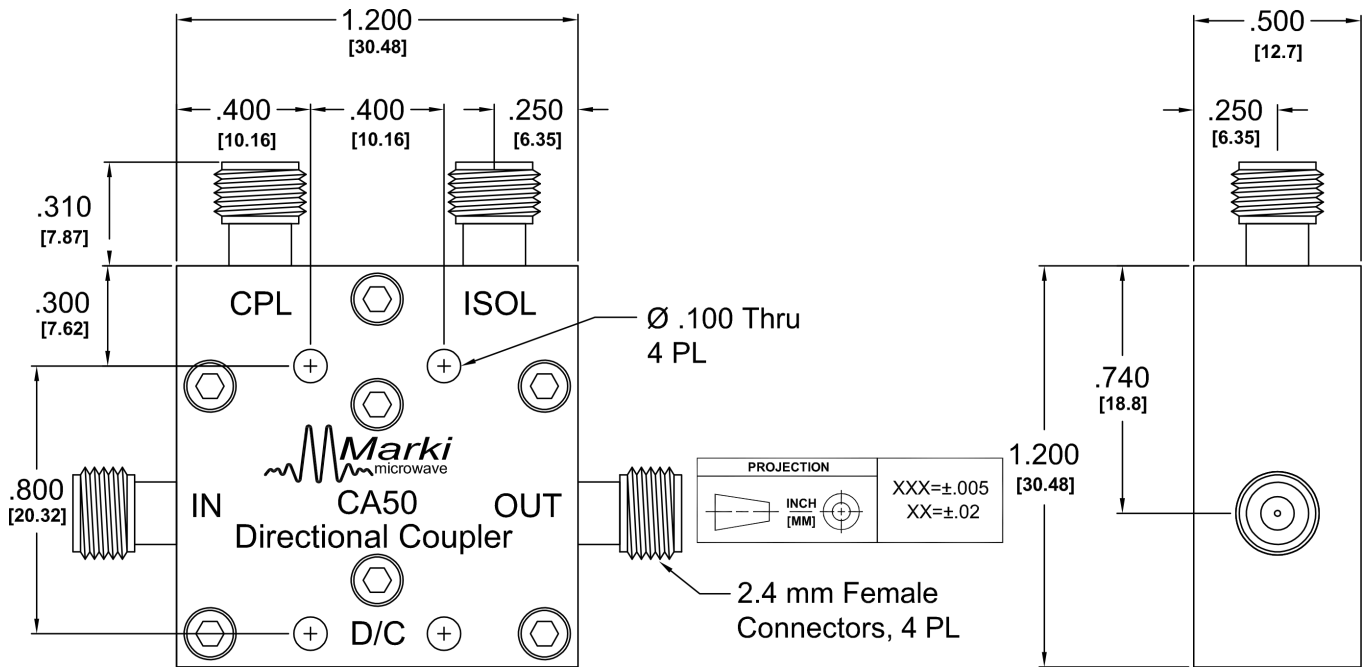
Typical Performance



Mechanical Data

Outline Drawing

Download : [Outline 2D Drawing](#) | [Outline 3D Drawing](#) | [Outline 3D STP](#)



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