

C10-0450

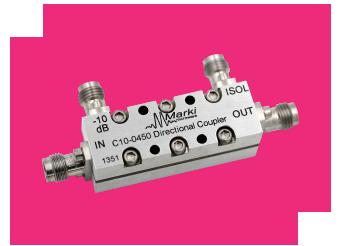
DIRECTIONAL COUPLER

DEVICE OVERVIEW

General Description

The C10-0450 is a broadband 4-50 GHz, 10 dB directional coupler. The multisection tri-plate stripline design exhibits excellent coupling flatness and VSWR to 50 GHz. Custom designs are also available, contact the factory for details.

[Download s-parameters here](#)



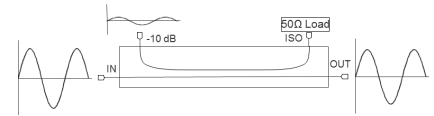
Features

- Broadband Performance
- Excellent Coupling Flatness
- High Directivity
- Low VSWR

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Connectors	Green Status	Product Lifecycle	Export Classification
C10-0450	DIRECTIONAL COUPLER	<u>Standard</u>	REACH RoHS	Released	EAR99

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Revision History

Revision Code	Revision Date	Comment
H	2020-04-01	Updated Direct Line IL specs
I	2025-08-26	Updated Connector Type

Port Configuration and Functions

Port Functions

Port	Function	Connector Type	Description	DC Equivalent Circuit
-10dB	-10dB Coupled Output	2.4F	-10dB coupled output port.	-
IN	RF Input	2.4F	RF input port.	-
ISOL	Isolated	2.4F	Isolated port.	-
OUT	RF Output	2.4F	RF output port.	-

Specifications

Absolute Maximum Ratings

Parameter	Maximum Rating	Unit
RF Power Handling	15	W
Minimum Operating Temperature	-55	°C
Maximum Storage Temperature	125	°C
Maximum Operating Temperature	100	°C
Minimum Storage Temperature	-65	°C

Package Information

Parameter	Details	Rating
Weight	-	35g
Dimensions	-	40.6x13.97 mm

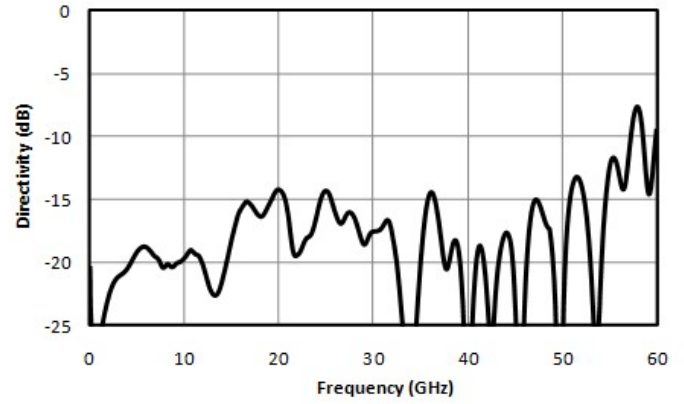
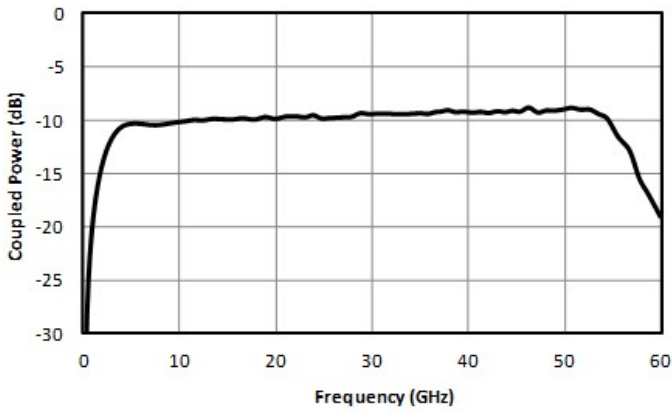
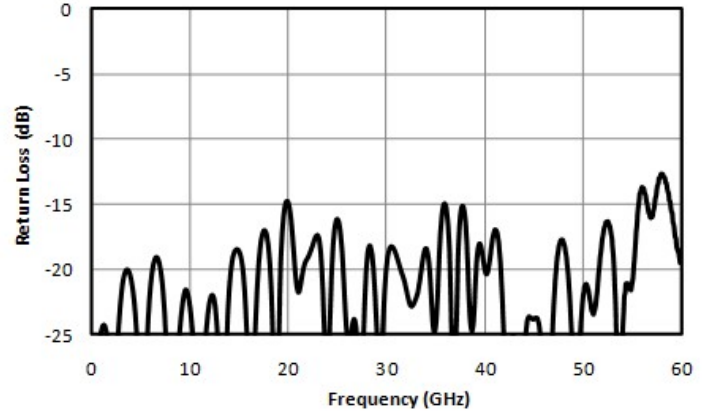
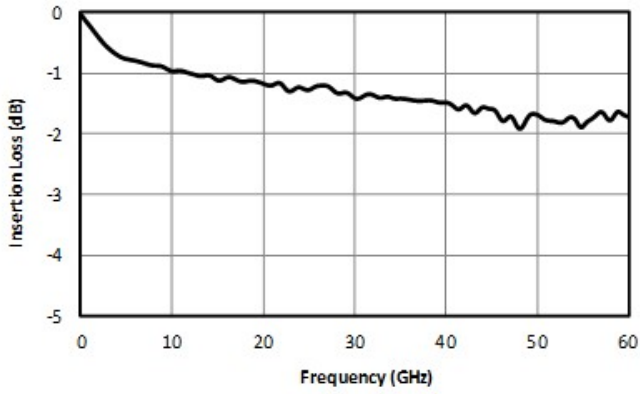
Electrical Specifications

The electrical specifications apply at TA=+25°C in a 50Ω system

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Amplitude Flatness ¹	-	4	50	-	0.5	1.5	dB
Directivity	-	4	50	9	15	-	dB
Direct Line Insertion Loss	DC-50	-	-	-	-	2.5	dB
Mean Coupling	-	4	50	-	10	-	dB
VSWR	-	4	40	-	1.35	1.55	
VSWR	-	40	50	-	1.55	-	

^[1] Deviation from average coupling.

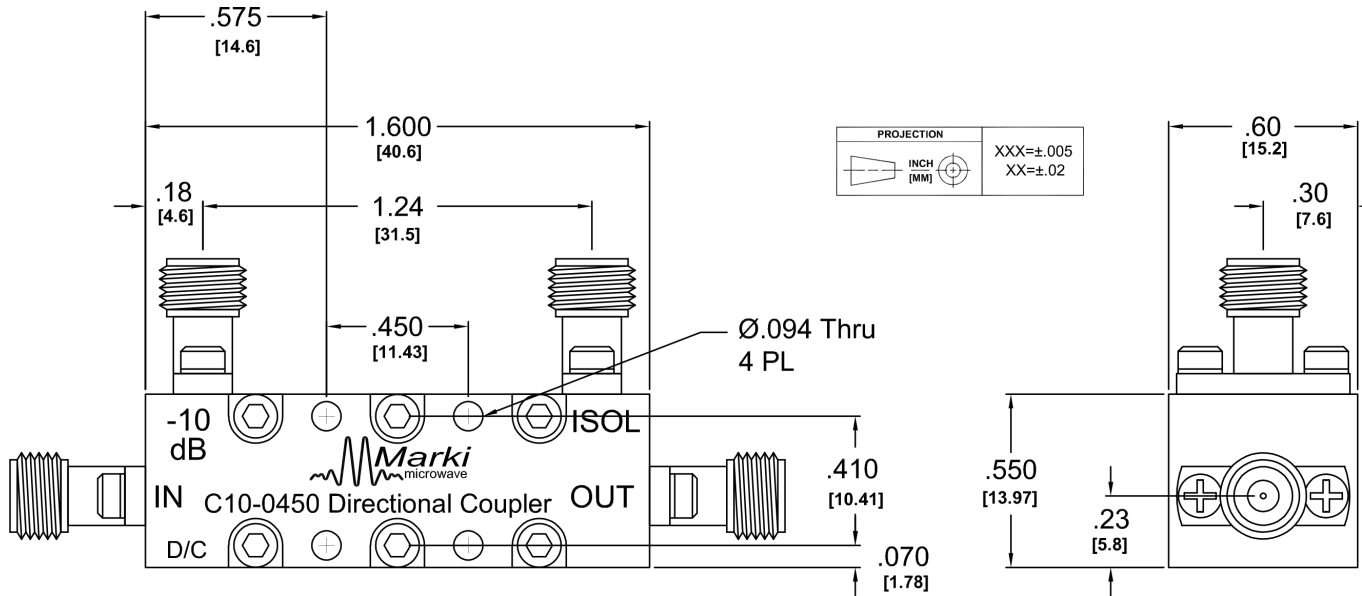
Typical Performance Plots



Mechanical Data

Outline Drawing

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



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