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C17-0R512
DIRECTIONAL COUPLER

DEVICE OVERVIEW

General Description

The C17-0R512 is a high power, broadband bidirectional coupler capable of operation to 12 GHz. The multisection stripline design exhibits excellent coupling flatness and VSWR at all ports. This coupler is available with SMA and APC-7 connector option.

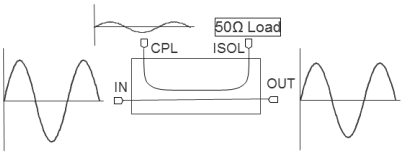
Features

- Low Insertion Loss
- High Power Handling
- Broadband Performance
- High Directivity
- Low VSWR

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Connectors	Green Status	Product Lifecycle	Export Classification
C17-0R512	DIRECTIONAL COUPLER	Standard	REACH RoHS	Released	EAR99

Table Of Contents

Revision History

Revision Code	Revision Date	Comment
A	2021-02-01	Specs table update

Port Configuration and Functions

Port Functions

Port	Function	Connector Type	Description	DC Equivalent Circuit
COUP	-17dB Coupled Output	SMAF	-	-
IN	RF Input	SMAF	-	-
ISOL	Isolated	SMAF	-	-
OUT	RF Output	SMAF	-	-

Specifications

Absolute Maximum Ratings

Parameter	Maximum Rating	Unit
RF Power Handling	80	W
Minimum Storage Temperature	-65	°C
Maximum Storage Temperature	125	°C
Minimum Operating Temperature	-55	°C
Maximum Operating Temperature	100	°C

Package Information

Parameter	Details	Rating
Weight	-	600g
Dimensions	-	182.73 x 46.91mm

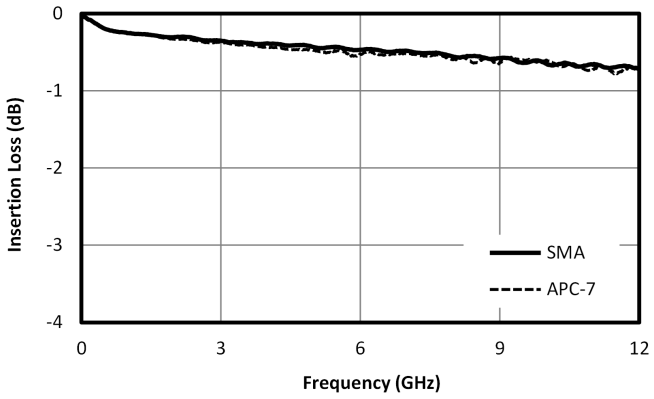
Electrical Specifications

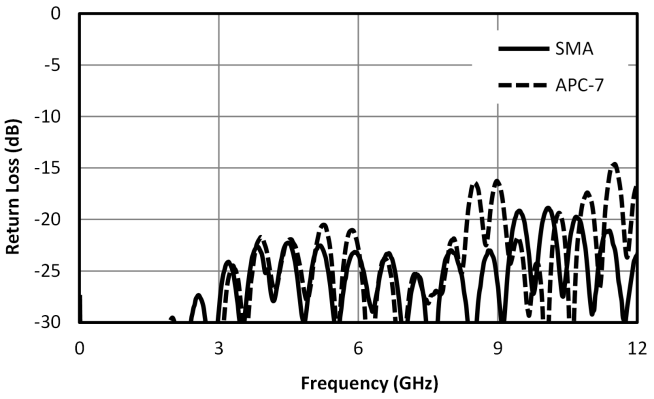
The electrical specifications apply at TA=+25°C in a 50Ω system

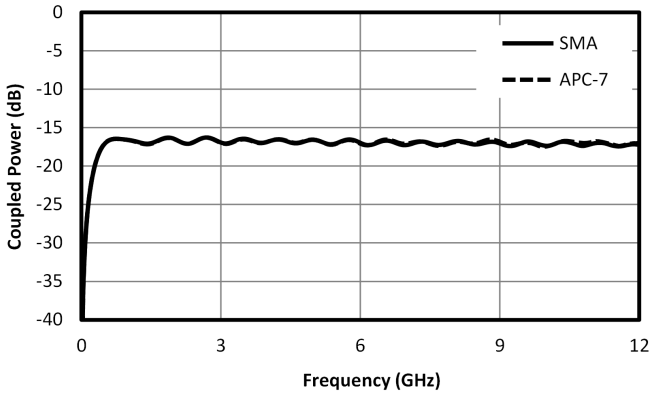
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Amplitude Flatness [1]	-	0.5	12	-	0.6	1.2	dB
Directivity	-	0.5	12	13	20	-	dB
Direct Line Insertion Loss	-	0.5	-	-	0.17	-	dB
Mean Coupling	-	0.5	12	-	17	-	dB
VSWR [2]	-	0.5	12	-	1.2	1.7	
VSWR	-	0.5	12	-	1.2	1.5	
Weight [3]	-	-	-	-	600	-	g

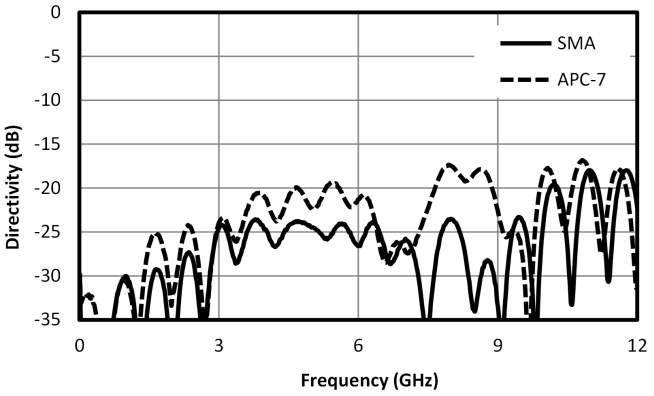
[1] Deviation from average coupling
[2] Max and min values given for SMA (APC-7) connectors
[3] Weight listed is for SMA connectorized package. Each APC-7 connector is an additional 50 grams

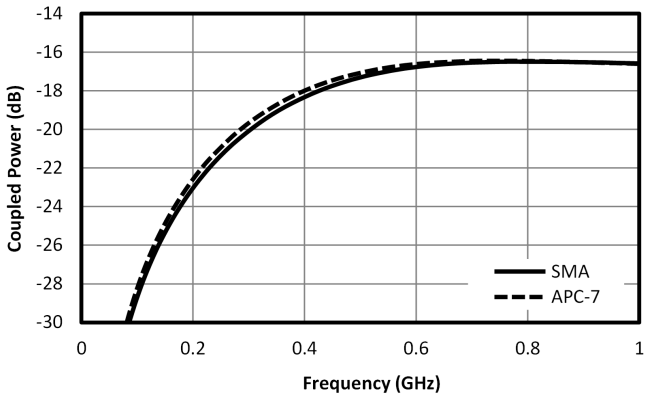
Typical Performance Plots







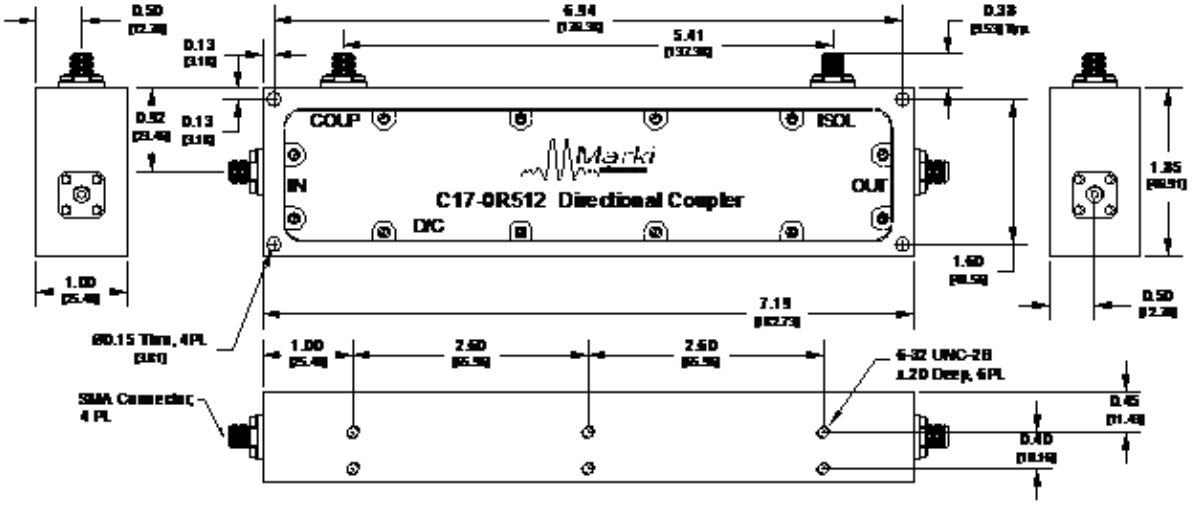




Mechanical Data

Outline Drawing

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



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