

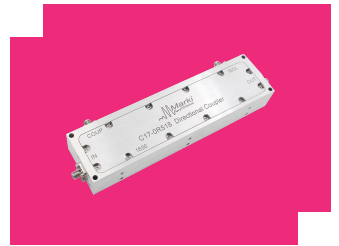
C17-0R506

Directional Coupler

DEVICE OVERVIEW

General Description

The C17-0R506 is a high power, broadband bidirectional coupler capable of operation to 6 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.



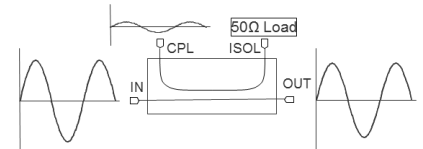
Features

- 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
C17-0R506A	Directional Coupler	<u>Standard</u>	REACH RoHS	Released	EAR99
C17-0R506	Directional Coupler	<u>Standard</u>	REACH RoHS	Released	EAR99

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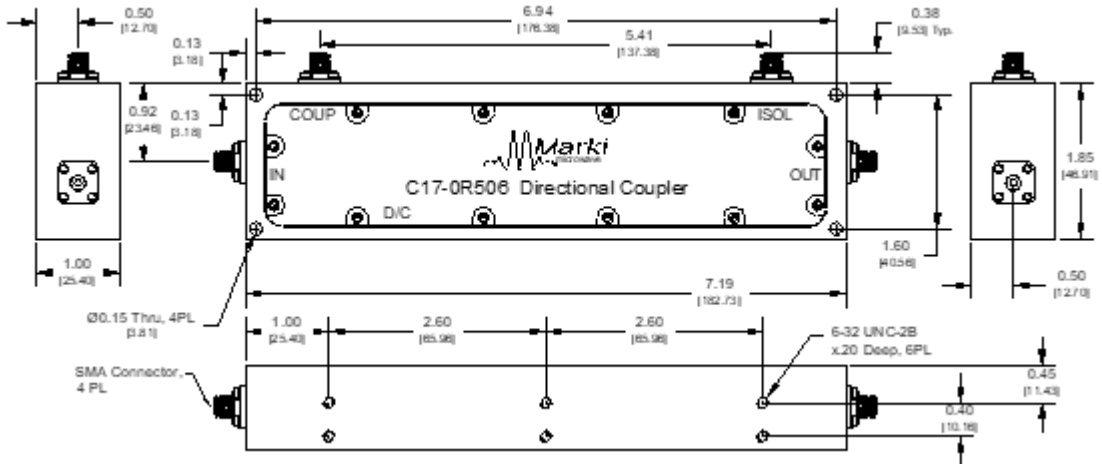
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Revision History

Revision Code	Revision Date	Comment
A	2025-08-14	Operating Temperature Included

Port Configuration and Functions

Port Diagram



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
Maximum Operating Temperature	100	°C
Minimum Operating Temperature	-55	°C
RF Power Handling	120	W

Package Information

Parameter	Details	Rating
Weight	-	600g
Dimensions	-	176.38 x 40.56 mm

Electrical Specifications

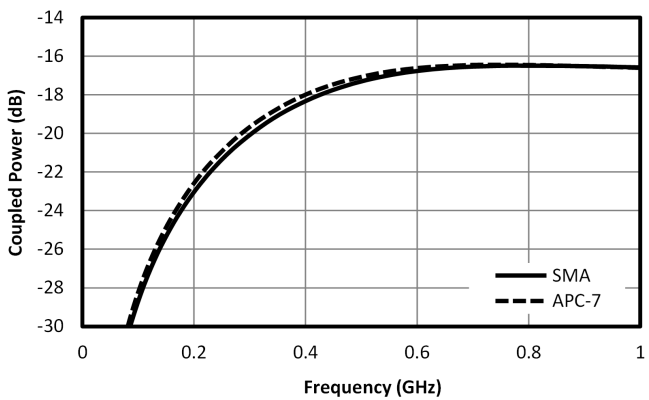
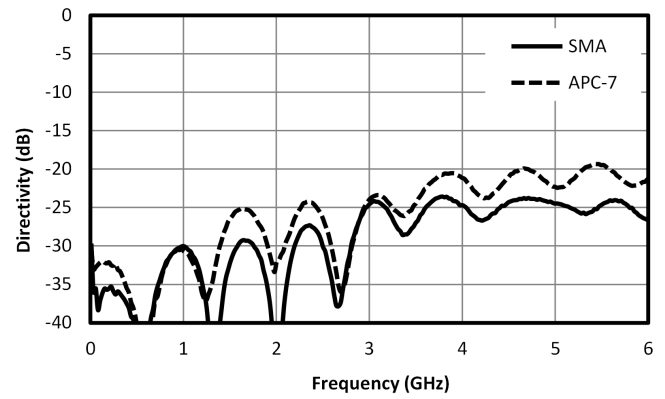
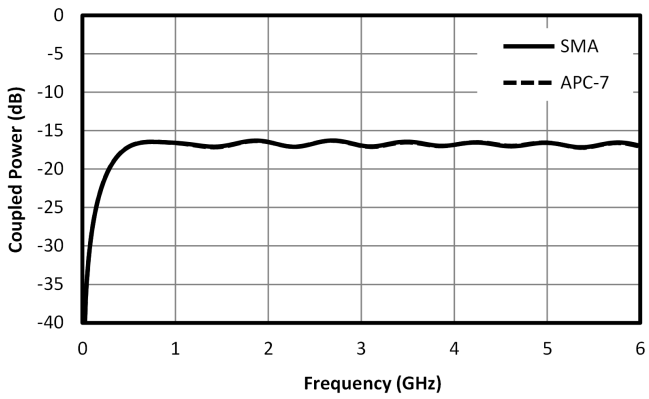
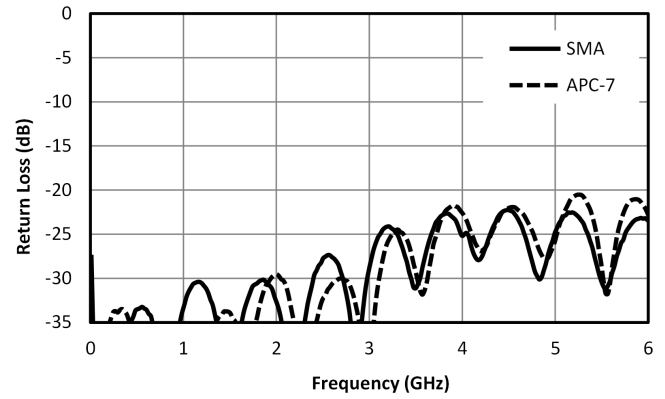
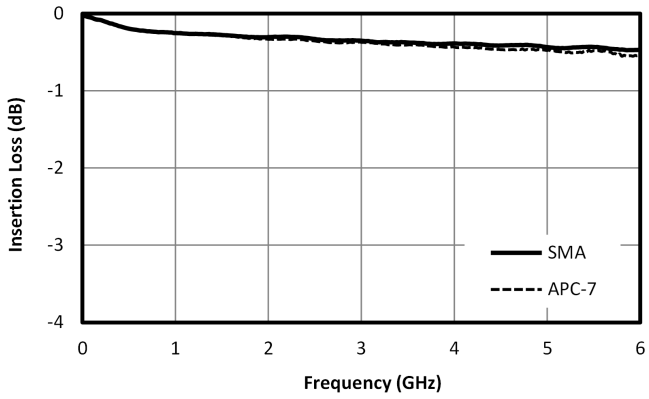
Specifications guaranteed when operated in a 50Ω system.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Amplitude Flatness ¹	-	0.5	6	-	0.6	1.2	dB
Directivity	-	0.5	6	15	20	-	dB
Direct Line Insertion Loss	-	0.5	6	-	-	1	dB
Direct Line Insertion Loss	-	0.5	6	-	0.17	-	dB
Direct Line Insertion Loss	-	0.5	6	-	0.4	-	dB
Mean Coupling	-	0.5	6	-	17.5	-	dB
VSWR	-	0.5	6	-	1.2	1.45	
Weight ²	-	-	-	-	600	-	g

^[1] Deviation from average coupling.

^[2] Weight listed is for SMA connectorized package. Each APC-7 connector is an additional 50 grams.

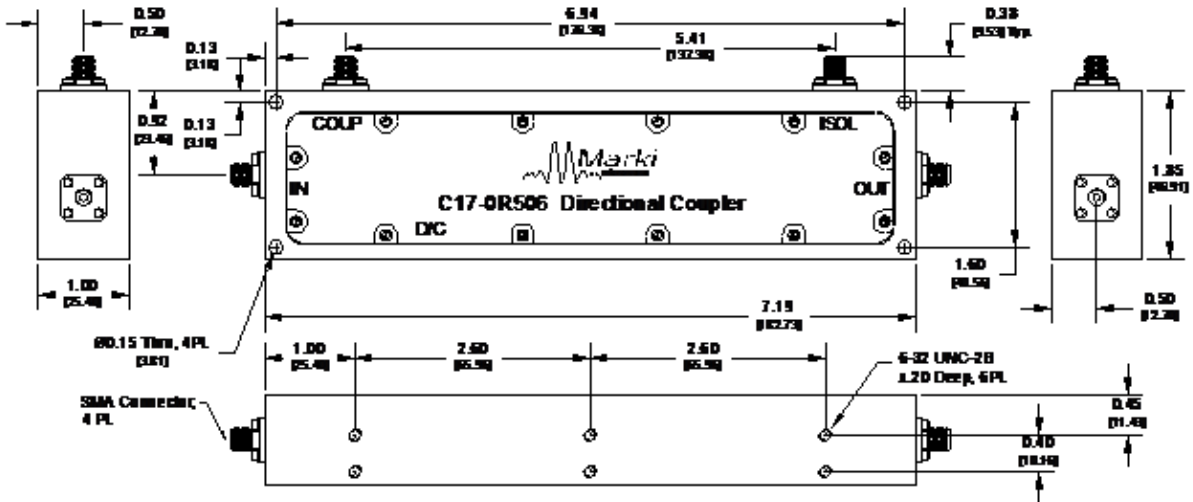
Typical Performance



Mechanical Data

Outline Drawing

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



Weight listed is for SMA connectorized package. Each APC-7 connector is an additional 50 grams.

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