1-40GHz Broadband Directional Coupler

Product Overview

AT Microwave offers high performance and broadband directional couplers from DC-67GHz, with SMA, 2.92mm, 2,4mm and 1.85mm connectors.

Based on our excellent design work, precise machine tolerance and outstanding quality plating, we can provide band pass filter with low insertion loss, good return loss and high rejection at the same time.

More information, please visit www.atmicrowave.com

Advantages

- ✓ Broadband Performance
- ✓ Excellent Coupling Accuracy
- ✓ High Directivity
- ✓ Good Return Loss

Application

- ✓ 5G Communication
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

Key Features

Parameter	Min	Typical	Max
Frequency		1-40GHz	
Mean Coupling		20 dB	
Coupling Accuracy		+/-1.2dB	
Main Line Extra Insertion Loss		-1.5dB	-2.8dB
Main Line VSWR		1.5	1.8
Coupling Line VSWR		1.5	1.8
Directivity	10dB	13dB	
CW Power			20W
Peak Power			3kW
Spec Temp		25C	

Mechanical Information

Item	Description
Input Port	2.92mm Female
Output Port	2.92mm Female
Case Material	Aluminum
Finish	Painted
Weight	80g
Size:	See outline

Absolute Maximum Ratings Table

Parameter	Value
RF Input Power CW	20W
Operating Temperature	-40 to + 85C
Storage Temperature	-55 to +125C

Notes:

1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.

AT-C20-0140

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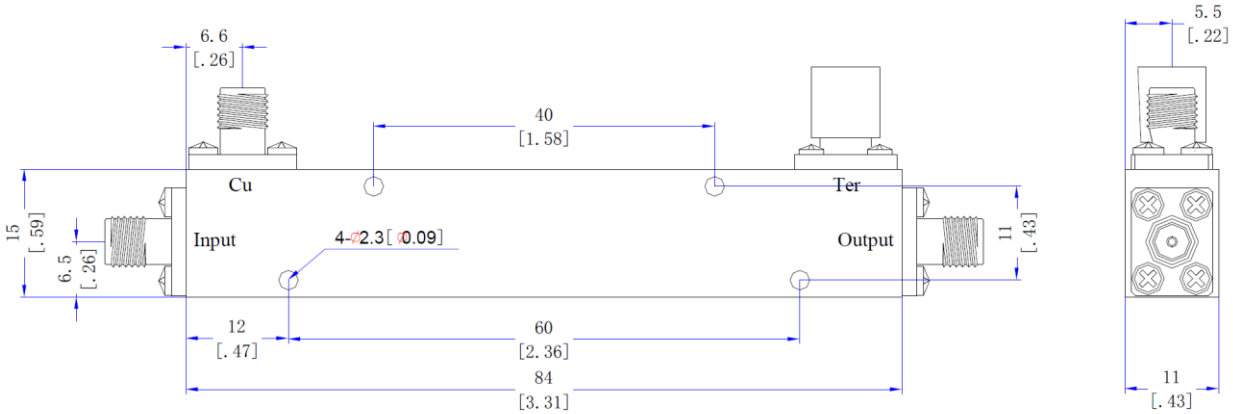
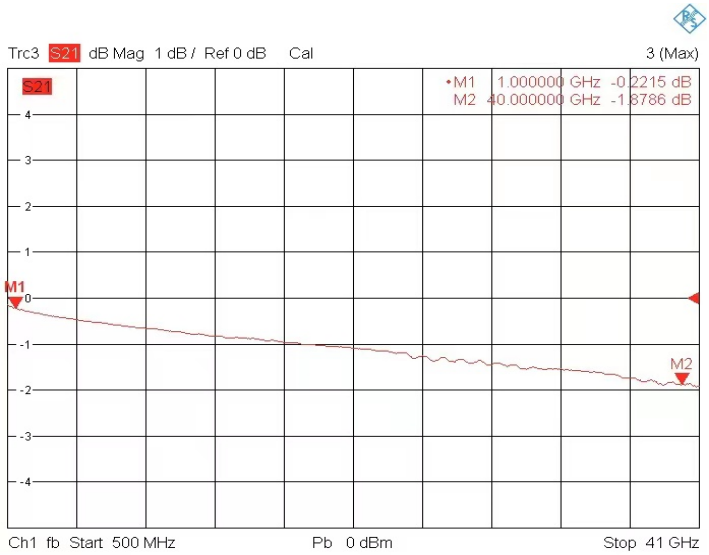
Dimension: (unit in mm)



Test Data



Main Line S21 vs Frequency

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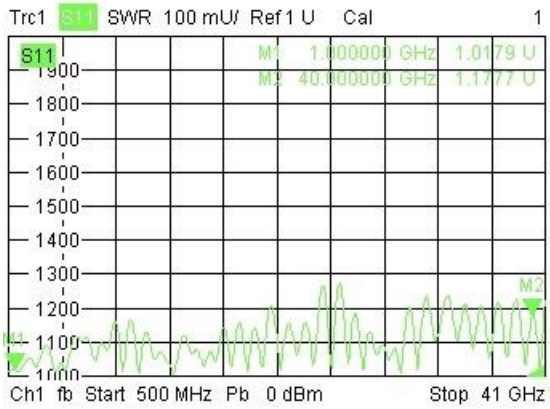
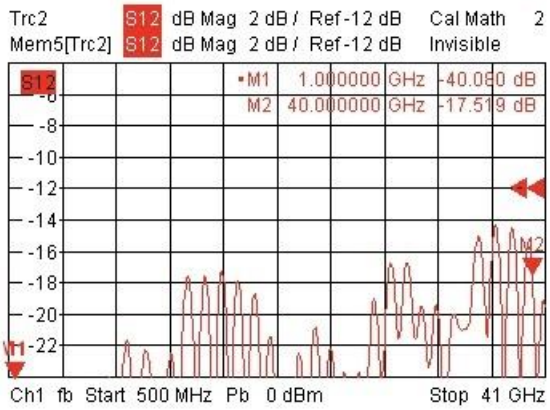
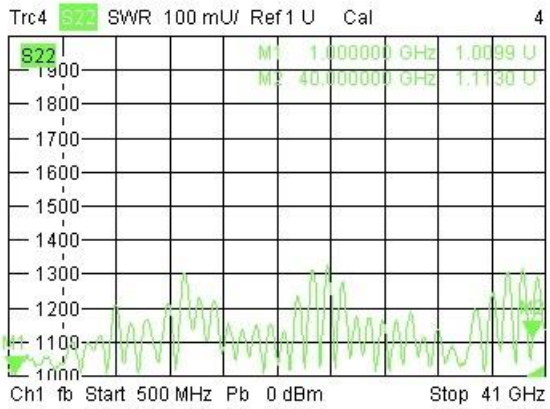

Trc1 S11 SWR 100 mU/ Ref 1 U Cal 1
S11
M1 1.000000 GHz 1.0179 U
M2 40.000000 GHz 1.1777 U
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
M1
M2
Ch1 fb Start 500 MHz Pb 0 dBm Stop 41 GHz


Trc2 S12 dB Mag 2 dB / Ref -12 dB Cal Math 2
Mem5[Trc2] S12 dB Mag 2 dB / Ref -12 dB Invisible
S12
•M1 1.000000 GHz -40.080 dB
M2 40.000000 GHz -17.519 dB
-8
-10
-12
-14
-16
-18
-20
-22
M1
M2
Ch1 fb Start 500 MHz Pb 0 dBm Stop 41 GHz


Trc4 S22 SWR 100 mU/ Ref 1 U Cal 4
S22
M1 1.000000 GHz 1.0099 U
M2 40.000000 GHz 1.1130 U
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
M1
M2
Ch1 fb Start 500 MHz Pb 0 dBm Stop 41 GHz