

# Directional Coupler

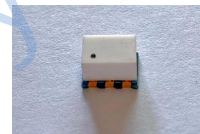
## Features

- useable to 1500 MHz
- low mainline loss, 0.5 dB typ.
- high directivity, 26 dB typ.
- aqueous washable

## Applications

- cable tv

## HT-ADC-20-12+



50Ω 100 to 1200 MHz

### Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		INSERTION LOSS ABOVE 3.0 dB		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT, W	
	Nom.	Flatness	Min.	Max.	Min.	Max.		Typ.	L Max.
100-1200	20.0±0.75	±0.7	0.5	1.1	13	26	1.17	1.0	1.0

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

Permanent damage may occur if any of these limits are exceeded.

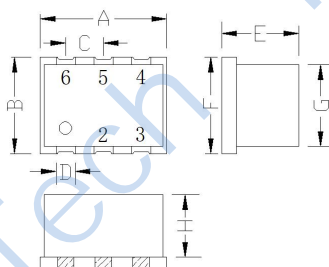
### Pin Connections

INPUT	1
OUTPUT	6
COUPLED	3
GROUND	2
50Ω TERM EXTERNAL	4
ISOLATE (DO NOT USE)	5

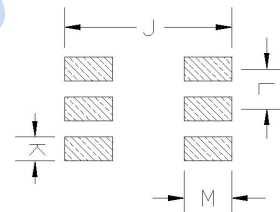
### Typical Performance Data (TEST CONDITIONS: INPUT POWER = 0dBm @ Temperature = +25°C)

Freq. (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
100	0.34	19.94	22.33	29.24	25.01	30.72
250	0.37	20.14	22.91	26.99	24.13	28.60
350	0.39	20.24	23.45	25.38	22.81	26.88
500	0.46	20.56	26.44	23.21	21.05	24.55
600	0.50	20.50	27.16	22.03	19.94	23.24
700	0.53	20.55	27.78	21.02	18.96	22.06
800	0.56	20.58	27.00	20.17	18.09	21.12
900	0.61	20.61	25.40	19.23	17.25	20.16
1100	0.69	20.61	22.34	17.44	15.64	18.19
1200	0.76	20.63	20.72	16.56	14.90	17.35

### Outline Drawing



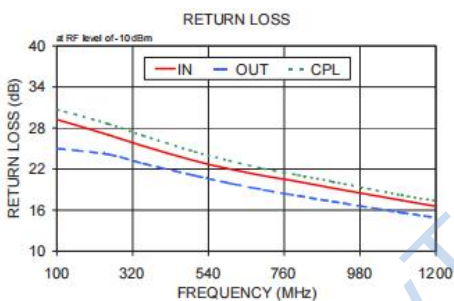
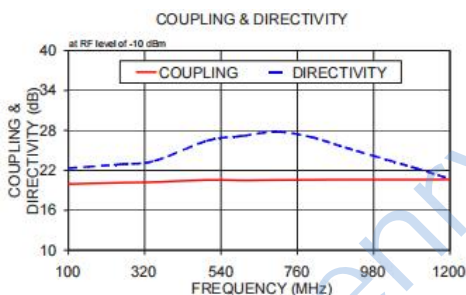
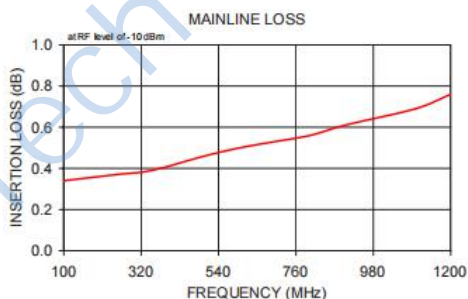
### PCB Land Pattern



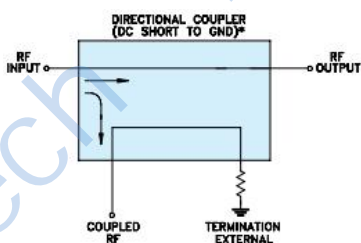
Suggested Layout,  
Tolerance to be within ±0.02

### Outline Dimensions: Unit (mm)

A	8.70	J	8.00
B	6.50	K	1.50
C	2.54	G	5.50
D	1.30	H	4.30
E	5.40	L	2.54
F	6.50	M	2.00
WT	0.5g		



### Electrical Schematic



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