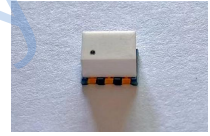


# Directional Coupler

## HT-ADC-20-4+



50Ω 5 to 1000 MHz

### Features

- wideband, 5-1000 MHz
- low mainline loss, 0.5 dB typ.
- high directivity, 21 dB typ

### Applications

- cable tv
- communications

### 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.
5-1000	20.0±0.5	±0.8	0.4	1.3	15	21	1.1	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.

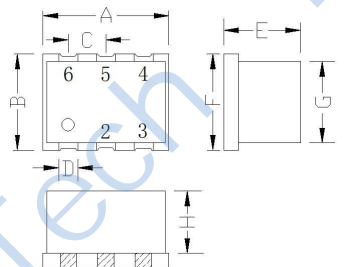
### Pin Connections

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

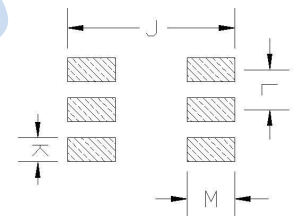
### Typical Performance Data (TEST CONDITIONS: INPUT POWER = 0dBm @ Temperature = +25°C)

Freq. (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
5	0.41	19.60	20.25	26.42	27.32	22.39
10	0.37	19.61	19.75	29.58	31.08	25.96
50	0.36	19.67	20.03	32.86	36.64	31.40
100	0.37	19.69	20.19	31.12	34.33	29.86
200	0.41	19.77	20.38	27.29	29.93	25.70
500	0.52	19.94	20.50	21.37	23.07	19.21
600	0.56	19.91	20.51	20.13	21.56	17.75
700	0.60	19.90	20.14	18.93	20.38	16.62
800	0.65	19.90	19.28	17.86	19.26	15.63
900	0.70	19.86	18.29	16.81	18.23	14.77
1000	0.76	19.84	17.38	15.80	17.18	13.97

### Outline Drawing



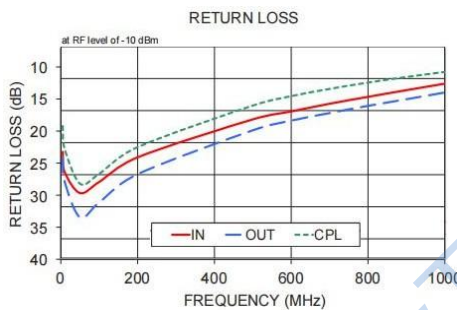
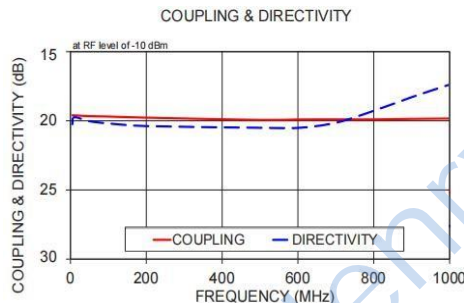
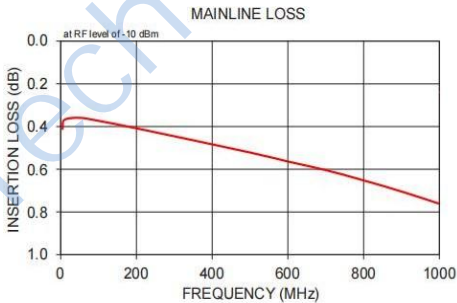
### PCB Land Pattern



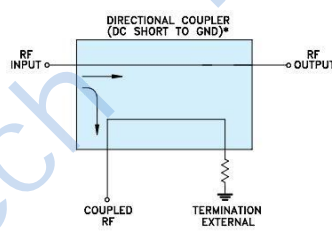
Suggested Layout, Tolerance to be within ±0.02

### 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



\* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) AND EXTERNAL TERMINATION.