

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

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

Maximum Ratings

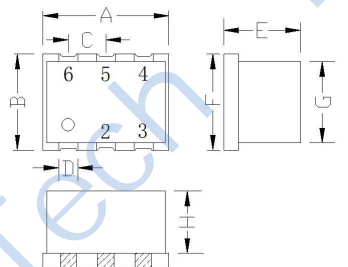
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

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

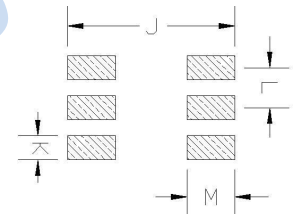
Pin Connections

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

Outline Drawing



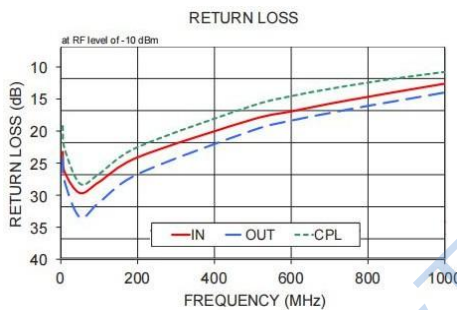
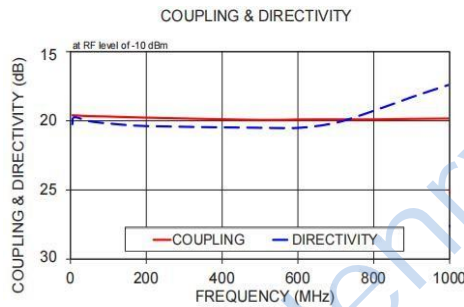
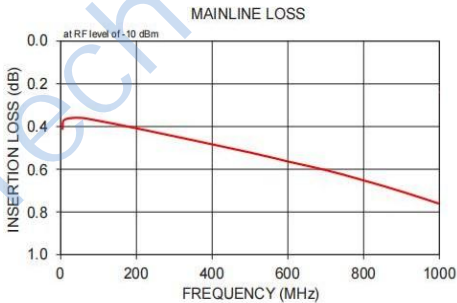
PCB Land Pattern



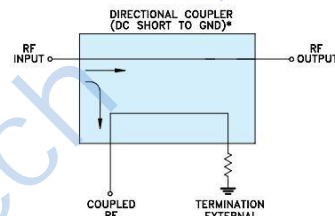
Suggested Layout, Tolerance to be within ±0.02

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.