

Surface Mount Directional Coupler

75Ω 5 to 1000 MHz

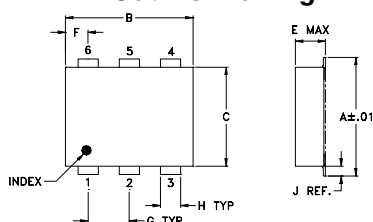
Maximum Ratings

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

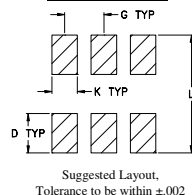
Pin Connections

INPUT	1
OUTPUT	6
COUPLED	3
GROUND	2
75Ω TERM EXTERNAL	4
ISOLATE (DO NOT USE)	5

Outline Drawing



PCB Land Pattern

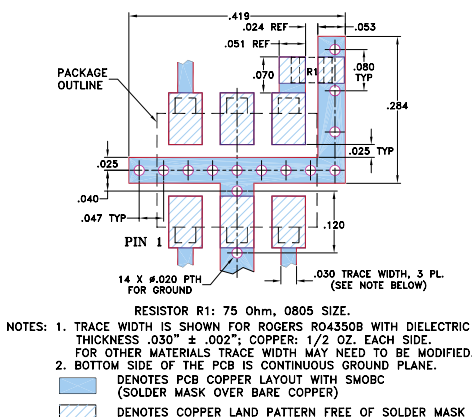


Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54

H	J	K	L	wt
.030	.026	.065	.300	grams
0.76	0.66	1.65	7.62	0.20

Demo Board MCL P/N: TB-08 Suggested PCB Layout (PL-042)



Features

- wideband, 5-1000 MHz
- excellent coupling flatness, ± 0.15 typ.
- aqueous washable
- protected by U.S. Patents 6,133,525 & 6,140,887

Applications

- cable tv
- communications

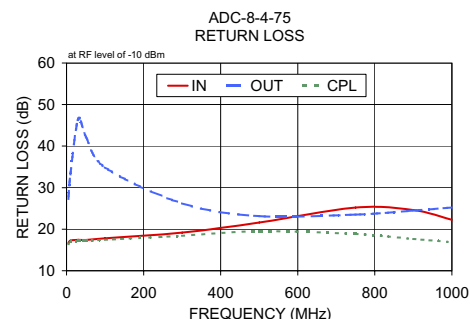
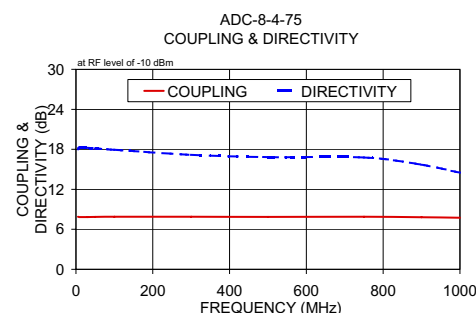
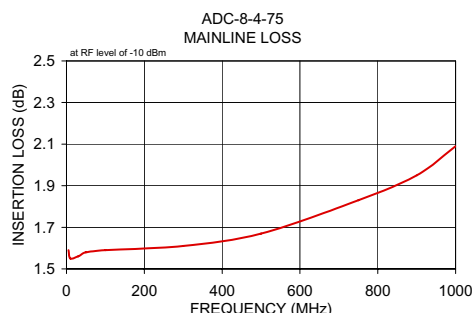
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
			L		M		U		L		M		U				
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.			Min.
5-1000	7.9±0.5	±0.5	1.55	2.6	1.6	2.2	2.0	2.7	18	14	17	14	16	10	1.2	1.0	1.0

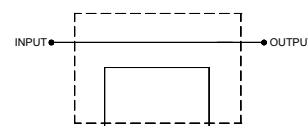
L= 5-50 MHz M= 50-500 MHz U= 500-1000 MHz
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
5.00	1.59	7.88	18.03	16.64	27.26	16.38
10.00	1.55	7.85	18.25	17.24	33.18	16.95
30.00	1.56	7.85	18.22	17.43	46.40	17.15
50.00	1.58	7.86	18.12	17.42	42.30	17.16
100.00	1.59	7.88	17.93	17.80	34.89	17.46
300.00	1.61	7.88	17.18	19.18	26.23	18.41
500.00	1.67	7.87	16.83	21.62	23.15	19.50
750.00	1.83	7.89	16.78	25.20	23.50	18.86
900.00	1.95	7.81	15.70	24.60	24.50	17.65
1000.00	2.09	7.73	14.49	22.24	25.22	16.87



electrical schematic



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REV. C
M102713
ED-6621
ADC-8-4-75
WZ/TD/CP
060615