

Surface Mount Bi-Directional Coupler

High Power, 50Ω

800 to 1600 MHz

NEW!
BDCA-6-16

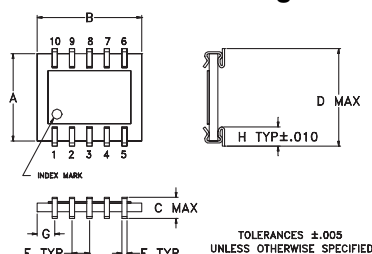
Maximum Ratings

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

Pin Connections

INPUT	1
OUTPUT	6
COUPLED (forward)	10
COUPLED (reverse)	5
GROUND	2,3,4,7,8,9

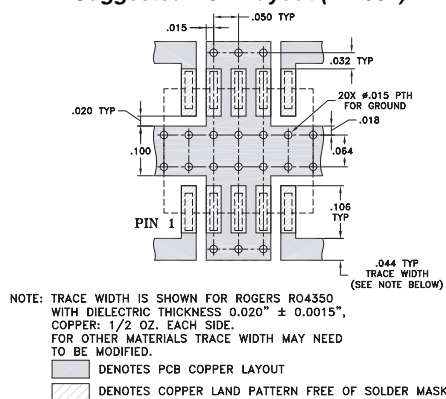
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.250	.300	.070	.320	.050	.015	.050	.075	.030
6.35	7.62	1.78	8.12	1.27	.38	1.27	1.91	.76
K	L	M	N	P	Q	R		wt.
.095	.330	.100	.020	.015	.070	.014		grams
2.41	8.38	2.54	.51	.38	1.78	.36		.3

Demo Board MCL P/N: TB-115 Suggested PCB Layout (PL-004)



Features

- four-port coupler
- wideband, 800-1600 MHz
- excellent VSWR, 1.05:1 typ., all ports
- good flatness, ±0.5 dB typ.
- excellent power handling capability, 65W (960 MHz)
- hermetically sealed
- minimal variation with temperature
- low profile, 0.07" height

Applications

- cellular, PCS, PCN, UMTS
- ISM
- GPS

Bi-Directional Electrical Specifications

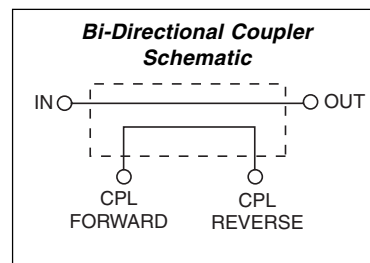
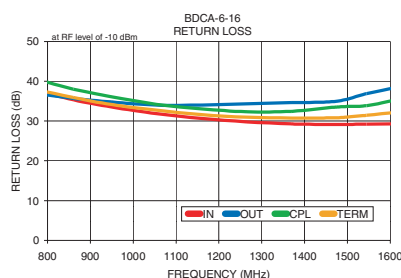
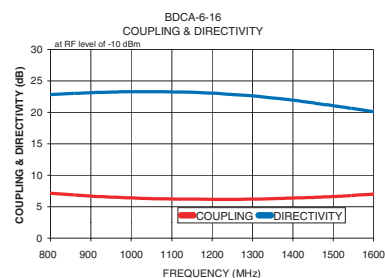
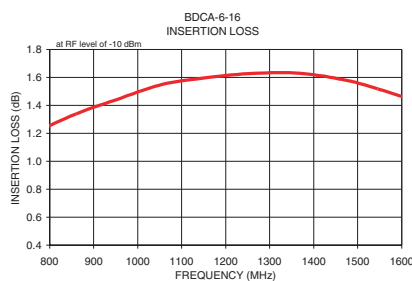
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS* (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT** (W)
	Nom.	Max. Flatness	Typ.	Max.	Typ.	Min.	Typ.	Max.
800-1600								
800-960	6.7±0.5	±0.6	1.4	1.8	24	20	1.05	65
960-1250	6.3±0.5	±0.4	1.6	2.0	23	19	1.05	55
1250-1600	6.6±0.7	±0.9	1.6	2.0	21	16	1.05	45

* Includes theoretical coupled power loss of 1.0 dB at 7 dB coupling.

** Derate linearly to 1/3 at 100°C

Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) In-Out	Coupling (dB)		Directivity (dB)		Return Loss (dB)			
		In-CPL	Out-Term	Out-CPL	In-Term	In	Out	CPL	Term
770.00	1.21	7.27	7.28	23.87	22.71	37.69	36.97	40.71	38.02
860.00	1.34	6.83	6.83	24.29	22.99	35.35	35.71	38.02	35.91
950.00	1.44	6.51	6.51	24.54	23.21	33.54	34.79	36.13	34.14
1055.00	1.55	6.27	6.28	24.47	23.28	31.85	34.01	34.21	32.72
1160.00	1.60	6.17	6.16	23.91	23.14	30.66	34.05	33.07	31.59
1265.00	1.63	6.15	6.16	22.98	22.77	29.83	34.37	32.35	30.98
1370.00	1.63	6.30	6.30	21.82	22.15	29.26	34.62	32.45	30.76
1475.00	1.58	6.53	6.53	20.57	21.27	29.16	35.00	33.54	30.84
1545.00	1.52	6.76	6.77	19.79	20.63	29.22	36.93	33.88	31.46
1615.00	1.45	7.07	7.07	19.07	19.94	29.28	38.44	35.35	32.21



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