

Surface Mount Bi-Directional Coupler

BDCA-10-25

High Power, 50Ω

800 to 2500 MHz



BLUE CELL™

CASE STYLE: SM1L
PRICE: \$5.95 ea. QTY (10-49)

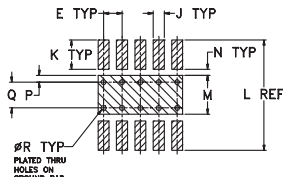
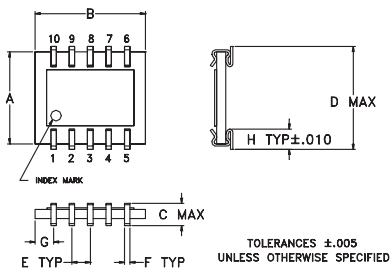
Maximum Ratings

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

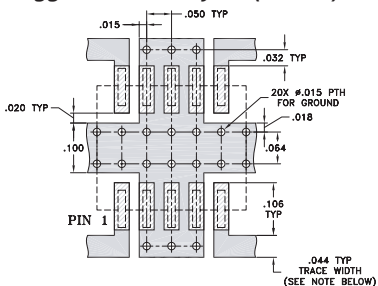
Outline Drawing



Outline Dimensions (inch)

	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, 800-2500 MHz
- excellent VSWR, 1.15:1 typ., all ports
- good flatness, ±0.6 dB typ.
- excellent power handling capability, 50W (800-1000 MHz)
- hermetically sealed
- minimal variation with temperature
- low profile, 0.07" height

Applications

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

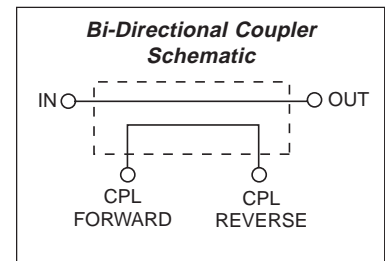
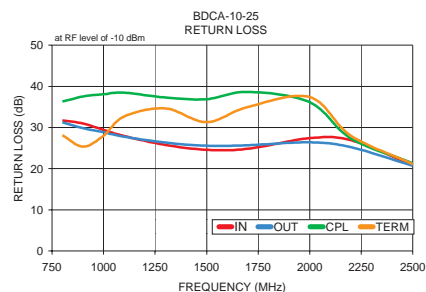
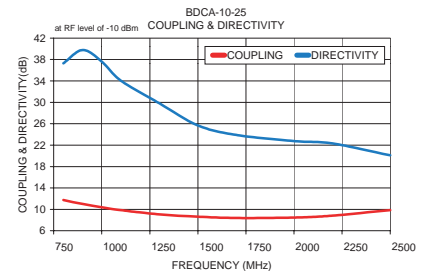
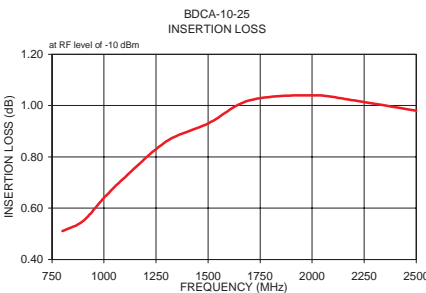
Bi-Directional Electrical Specifications

MODEL NO.	FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS* (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT** (W)
		Nom.	Max. Flatness	Typ.	Max.	Typ.	Min.		
BDCA-10-25	800-2500	10.1±2.0	±2.0	1.0	1.5	25	11	1.05	24
	800-1000	11.0±0.8	±1.2	0.6	1.0	32	20	1.05	50
	1700-2000	8.5±0.5	±0.6	1.1	1.5	23	16	1.05	34
	1000-2500	9.4±1.2	±1.5	1.0	1.5	22	11	1.05	24

* Includes theoretical coupled power loss of 0.46 dB at 10 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
800.00	0.51	11.74	11.94	33.32	37.31	31.70	31.27	36.30	28.13
900.00	0.55	11.01	11.20	35.71	39.79	30.99	29.85	37.54	25.34
1000.00	0.64	10.39	10.56	38.83	37.62	29.41	28.87	38.07	27.99
1100.00	0.72	9.85	10.07	39.71	34.05	27.94	27.76	38.46	32.68
1300.00	0.86	9.06	9.49	34.58	29.81	25.76	26.33	37.29	34.65
1500.00	0.93	8.63	8.86	30.88	25.68	24.58	25.59	36.88	31.32
1700.00	1.02	8.39	8.67	29.45	23.91	24.82	25.69	38.65	34.99
2000.00	1.04	8.47	8.73	30.20	22.76	27.40	26.41	36.15	37.39
2200.00	1.02	8.82	9.02	29.36	22.31	26.92	25.20	27.33	27.99
2500.00	0.98	9.86	9.92	21.31	20.10	20.89	20.70	21.30	21.10



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