

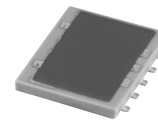
# Surface Mount Bi-Directional Coupler

High Power, 50Ω

800 to 2500 MHz

**NEW!**

**BDCA-15-25**



**BLUE CELL™**

CASE STYLE: DZ944  
PRICE: \$5.95 ea. QTY (10-49)

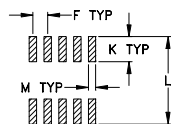
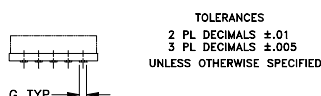
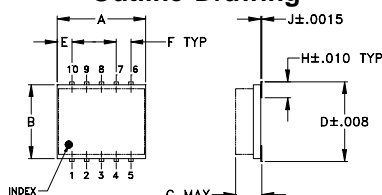
## Maximum Ratings

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

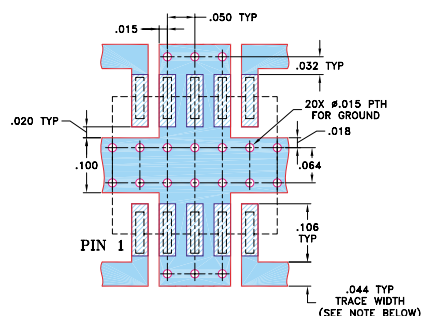


SUGGESTED LAYOUT FOR PCB LAND PATTERN

## Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K	L	M	wt
.30	.250	.052	.274	.050	.050	.012	.057	.004	.085	.296	.030	grams
7.62	6.35	1.32	6.96	1.27	1.27	0.30	1.45	0.10	2.16	7.52	0.76	0.25

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



NOTE: TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS 0.020" ± 0.0015", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Features

- four-port coupler
- wideband, 800-2500 MHz
- excellent VSWR, 1.15:1 typ. all ports
- minimal variation with temperature
- low profile, 0.07" height

## Applications

- cellular, PCA, PCN, UMTS
- ISM
- GPS

## Bi-Directional Electrical Specifications

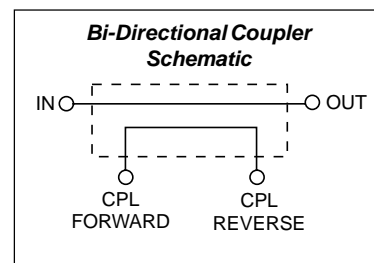
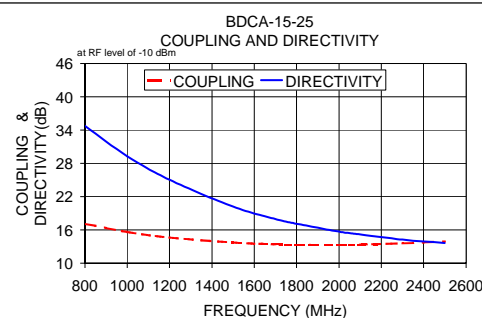
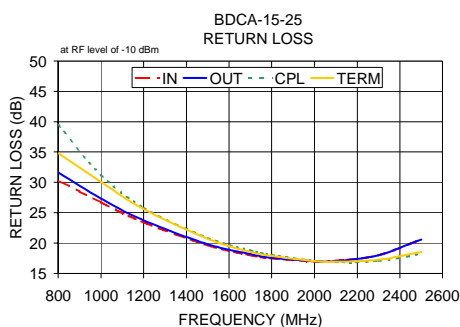
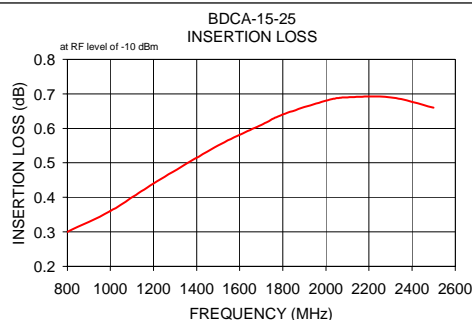
MODEL NO.	FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS* (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT** (W)
		Nom.	Max. Flatness	Typ.	Max.	Typ.	Min.		
BDCA-15-25	800-2500	15±1.7	±2.4	0.5	1.0	27	11	1.20	23
	800-1000	16.3±0.8	±1.1	0.35	0.6	27	19	1.15	40
	1800-2000	13.5±0.5	±0.3	0.55	1.0	17	12	1.35	28

\* Includes theoretical coupled power loss of 0.14 dB at 15 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	0.30	17.09	17.11	35.62	34.78	30.30	31.64	39.42	34.79
1000.00	0.36	15.63	15.63	27.89	29.29	26.70	27.33	31.23	30.07
1200.00	0.44	14.61	14.61	23.87	25.04	23.41	23.75	25.82	25.60
1500.00	0.55	13.70	13.71	19.67	20.19	19.65	19.81	20.85	20.70
1700.00	0.61	13.41	13.41	17.68	17.96	18.00	18.18	18.76	18.55
1800.00	0.64	13.34	13.34	16.92	17.12	17.50	17.57	18.05	17.88
2000.00	0.68	13.33	13.33	15.78	15.69	16.97	17.04	17.05	17.04
2100.00	0.69	13.39	13.37	15.31	15.19	17.07	17.02	16.88	16.93
2300.00	0.69	13.59	13.57	14.62	14.25	17.99	18.01	17.04	17.24
2500.00	0.66	13.96	13.93	14.06	13.64	20.62	20.58	18.22	18.53



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