

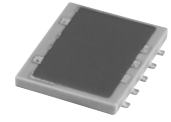
# Surface Mount Bi-Directional Coupler

**NEW!**

**BDCA-15-25**

High Power, 50Ω

800 to 2500 MHz



**BLUE CELL™**

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

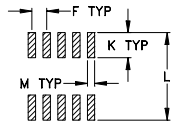
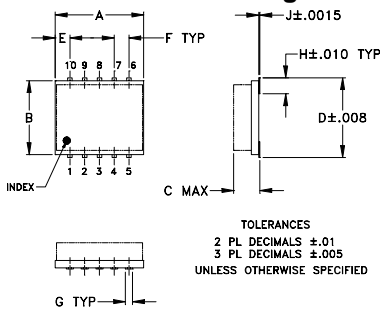
## Maximum Ratings

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



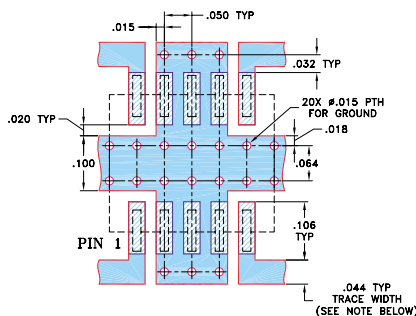
## Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.30	.250	.052	.274	.050	.050	.012
7.62	6.35	1.32	6.96	1.27	1.27	0.30

H	J	K	L	M	wt
.057	.004	.085	.296	.030	grams
1.45	0.10	2.16	7.52	0.76	0.25

## 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
- minimal variation with temperature
- low profile, 0.07" height

## Applications

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

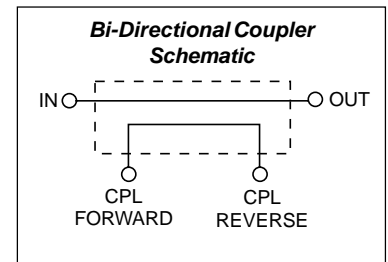
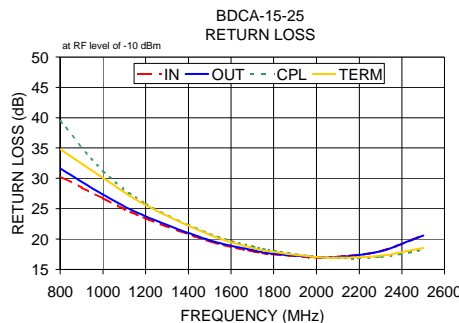
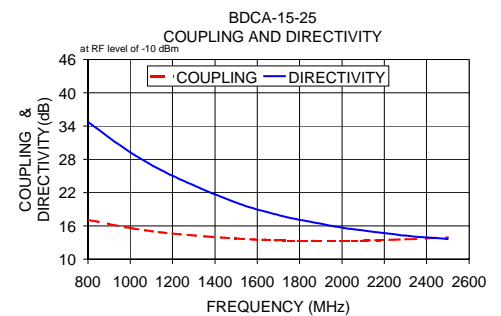
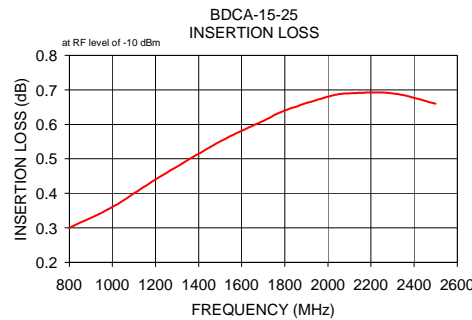
## Bi-Directional Electrical Specifications

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



**Mini-Circuits®**

INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

REV. C  
M94608  
ED-9168D/1  
BDCA-15-25  
LC/TD/CP/AM  
040930