

Surface Mount Bi-Directional Coupler

NEW!

BDCA-7-25

High Power, 50Ω

1200 to 2500 MHz

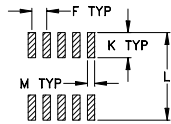
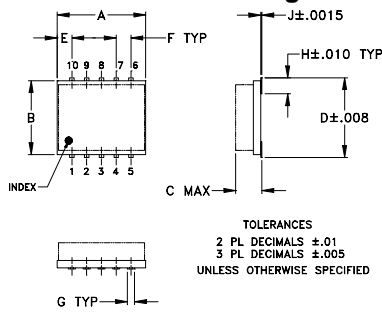
Maximum Ratings

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

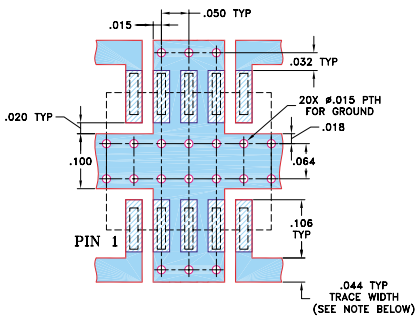


SUGGESTED LAYOUT FOR PCB LAND PATTERN

Outline Dimensions (inches)

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.

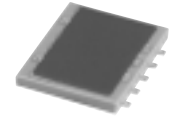
■ DENOTES PCB COPPER LAYOUT
 ▨ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- four-port coupler
- wideband, 1200-2500 MHz
- excellent VSWR, 1.05:1 typ., all ports
- good flatness, ±0.3 dB typ.
- excellent power handling capability, 35W (2100 MHz)
- hermetically sealed
- minimal variation with temperature
- low profile, 0.052" height

Applications

- PCS, PCN, UMTS
- ISM
- GPS
- defense



BLUE CELL™

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

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.		
1200-2500								
1200-1700	7.1±0.8	±0.8	1.5	1.9	22	19	1.08	35
1700-2100	6.5±0.5	±0.3	1.6	2.0	22	14	1.05	35
2100-2500	7.0±0.8	±1.0	1.5	2.0	22	12	1.10	27

* 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)		Coupling (dB)		Directivity (dB)		Return Loss (dB)			
	In-Out	In-CPL	Out-Term	Out-CPL	In-Term	In	Out	CPL	Term	
1200.00	1.20	7.44	7.44	28.71	30.67	33.76	38.52	34.05	31.62	
1250.00	1.25	7.25	7.26	28.83	32.19	34.26	41.86	36.87	33.16	
1300.00	1.30	7.10	7.09	28.92	33.55	34.75	58.50	42.17	34.02	
1500.00	1.47	6.62	6.62	26.70	32.36	29.75	32.95	35.05	30.66	
1700.00	1.59	6.36	6.37	23.78	26.87	25.23	26.63	27.37	25.76	
1860.00	1.66	6.30	6.30	21.94	23.76	23.19	23.89	24.17	23.22	
2100.00	1.70	6.39	6.38	19.67	20.71	21.34	21.69	21.28	20.95	
2260.00	1.69	6.57	6.56	18.53	19.15	20.76	21.18	20.21	20.12	
2420.00	1.64	6.84	6.84	17.58	17.85	20.67	21.04	19.83	19.80	
2500.00	1.60	7.01	7.00	17.10	17.32	20.88	21.37	19.63	19.70	

