

Surface Mount

Bi-Directional Coupler

NEW!

BDCA1-6-22

High Power, 50Ω

950 to 2200 MHz

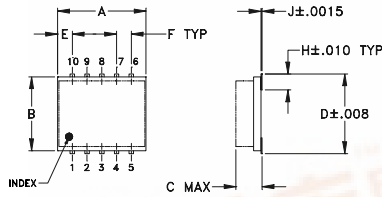
Maximum Ratings

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

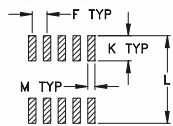
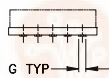
Pin Connections

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

Outline Drawing



TOLERANCES
2 PL DECIMALS ±.01
3 PL DECIMALS ±.005
UNLESS OTHERWISE SPECIFIED

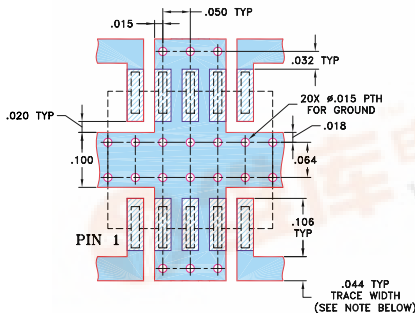


SUGGESTED LAYOUT FOR PCB LAND PATTERN

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)



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.

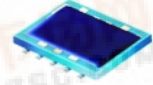
□ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- wideband, 950-2200 MHz
- excellent VSWR 1.15:1
- excellent power handling capability, 44W (1900 MHz)
- low temperature variation

Applications

- DCS, PCS
- mobile satellite



BLUE CELL™

CASE STYLE: DZ944
PRICE: \$3.95 ea. QTY (10-49)

Bi-Directional Electrical Specifications

MODEL NO.	FREQ. RANGE (MHz) $f_c - f_u$	COUPLING (dB)		MAINLINE LOSS* (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT** (W)
		Nom.	Max. Flatness	Typ.	Max.	Typ.	Min.		
BDCA1-6-22	950-2200								
	950-1400	6.9±1.0	±1.0	1.4	1.9	23	17	1.20	57
	1400-1900	6.0±0.5	±0.3	1.7	2.1	28	20	1.10	44
	1900-2200	6.5±0.7	±0.7	1.7	2.1	22	15	1.15	37

* Includes theoretical coupled power loss of 1.25 dB at 6 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-CPL	Out-Term	Out-CPL	In-Term	In	Out	CPL	Term
900.00	1.13	6.41	7.97	18.73	19.16	22.02	22.37	22.89	22.31
1100.00	1.37	7.03	7.01	20.95	21.69	23.33	23.95	25.33	24.01
1200.00	1.49	6.70	6.69	22.51	23.40	24.45	24.99	27.54	25.24
1300.00	1.57	6.41	6.40	24.54	25.66	26.11	26.55	30.92	26.77
1400.00	1.63	6.21	6.19	27.42	28.52	28.50	28.97	37.66	28.82
1500.00	1.68	6.10	6.07	31.79	31.71	32.09	32.46	45.49	31.40
1600.00	1.74	6.05	6.00	41.94	32.37	39.04	36.77	34.19	34.60
1800.00	1.75	6.09	6.04	30.48	25.81	35.26	32.67	26.19	44.83
2000.00	1.70	6.36	6.31	23.05	20.91	26.95	25.34	23.04	40.59
2200.00	1.65	6.90	6.85	18.81	17.40	23.34	21.86	21.49	35.92

