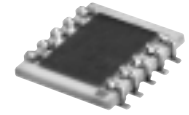


Bi-Directional Coupler

BDCA-10-25

High Power, 50Ω 800 to 2500 MHz



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

Maximum Ratings

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

Pin Configuration

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

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 min. (800-1000 MHz)
- hermetically sealed
- minimal variation with temperature
- low profile, 0.07" height

Applications

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

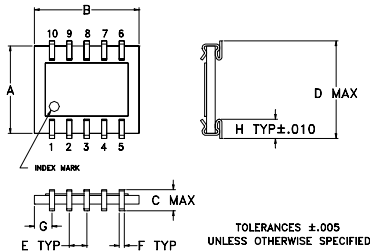


Electrical Specifications

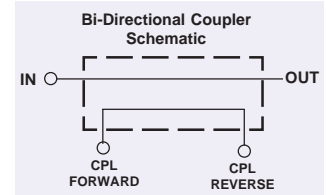
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS (dB)				DIRECTIVITY (dB)			VSWR (:1)	POWER INPUT (W)	THERMAL RESISTANCE θjc (°C/W)
	Nom.	Max. Flatness	L Typ.	M° Typ.	U Typ.	L Typ.	M° Typ.	U Typ.				
800-2500	10.1±2.0	±2.0		1.0	1.5		25	11		1.05	24***	37
800-1000	11.0±0.8	±1.2		0.6	1.0		32	20		1.05	50*	37
1700-2000	8.5±0.5	±0.6		1.1	1.5		23	16		1.05	34**	37
1000-2500	9.4±1.2	±1.5		1.0	1.5		22	11		1.05	24***	37

o When only specification for M range given, specification applies to entire frequency range.
* Derate linearly to 22W at 100°C
** Derate linearly to 15W at 100°C
*** Derate linearly to 10W at 100°C

Outline Drawing



SUGGESTED LAYOUT FOR PCB PATTERN
ADJACENT GROUND PINS SHALL BE CONNECTED TO EACH OTHER AND TO GROUND PAD



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	0.54	11.93	11.94	32.51	34.56	37.75	28.97	38.16	27.21
1000.00	0.70	10.57	10.59	30.71	32.55	37.29	26.69	47.24	25.37
1100.00	0.77	10.07	10.08	29.30	30.91	38.70	25.46	53.48	24.83
1320.00	0.93	9.27	9.28	26.65	27.71	39.29	24.25	39.24	23.90
1540.00	1.00	8.79	8.77	24.74	25.69	39.06	23.24	33.88	23.89
1760.00	1.04	8.60	8.59	23.53	24.56	41.40	23.60	33.09	24.57
2035.00	1.06	8.71	8.71	22.57	23.93	32.38	28.14	28.34	25.73
2200.00	1.04	9.01	8.97	21.60	23.25	28.77	39.99	25.89	27.54
2400.00	1.00	9.60	9.56	19.71	21.32	24.40	28.96	23.53	25.96
2500.00	1.00	9.99	9.95	18.46	19.94	23.12	24.42	21.93	23.31

Outline Dimensions (Inch/mm)

A	B	C	D	E	F	G	H	J
.250	.300	.070	.320	.050	.015	.050	.060	.030
6.35	7.62	1.78	8.12	1.27	.38	1.27	1.52	.76
K	L	M	N	P	Q	R	wt.	
.080	.330	.100	.020	.015	.070	.014	grams	
2.03	8.38	2.54	.51	.38	1.78	.36	.3	

