

DC Pass

Bi-Directional Coupler

ZBDC40-1450W+

50Ω Up to 50W 550 to 1450 MHz

Maximum Ratings

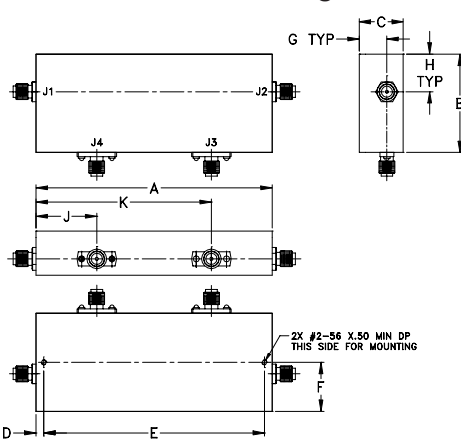
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	2.5A

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

INPUT	J1
OUTPUT	J2
COUPLED (forward)	J4
COUPLED (reverse)	J3

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
3.75	1.56	.70	.125	3.500	.780
5.25	39.62	17.78	3.18	88.90	19.81
G	H	J	K	wt	
.44	.60	.97	2.78	grams	
1.18	15.24	24.64	70.61	130.0	

Features

- wide frequency range, 550 to 1450 MHz
- good coupling flatness, ±0.2 dB typ over 800-1000 MHz
- high directivity, 25 dB typ.
- very good return loss, VSWR 1.1:1 typ.
- high power, up to 50W
- very low coupling temperature variation, ±0.1 dB typ.
- DC current through input to output 2.5A Max. at 50watt RF input power.

Applications

- cellular
- lab use

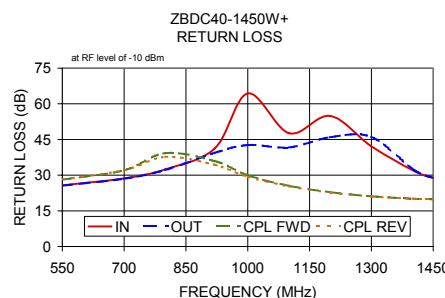
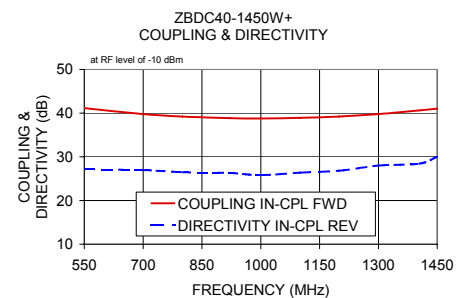
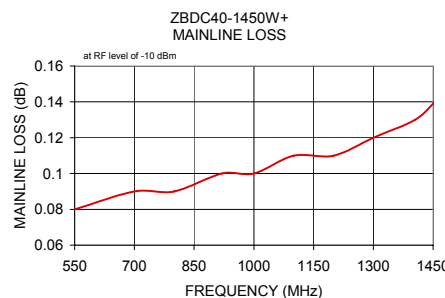
Bi-Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT (W)
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		
550-1450	39.9±1.5	±1.5	0.15	0.40	24	18	1.12	50
800-1000	39.9±1.5	±0.40	0.11	0.30	25	20	1.07	50

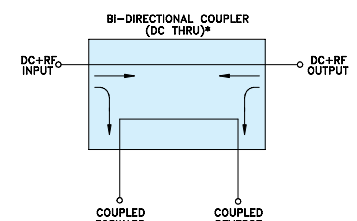
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB)		Directivity (dB)		Return Loss (dB)			
		In-Cpl Fwd	Out-Cpl Rev	Out-Cpl Fwd	In-Cpl Rev	In	Out	Cpl Fwd	Cpl Rev
550.00	0.08	41.16	41.16	26.60	27.12	25.73	25.62	28.14	28.21
700.00	0.09	39.77	39.79	25.76	26.97	28.67	28.52	32.06	32.07
800.00	0.09	39.23	39.22	25.13	26.50	32.49	32.19	39.25	37.68
920.00	0.10	38.87	38.87	24.80	26.31	41.24	39.39	35.92	34.36
1000.00	0.10	38.79	38.81	25.22	25.82	64.37	42.67	29.94	29.34
1100.00	0.11	38.91	38.92	25.09	26.37	47.62	41.68	25.51	25.29
1200.00	0.11	39.22	39.25	25.80	26.81	54.95	45.96	22.85	22.72
1300.00	0.12	39.76	39.78	25.84	28.00	42.16	46.08	21.11	21.07
1405.00	0.13	40.62	40.59	26.30	28.46	31.64	32.03	20.07	20.06
1455.00	0.14	41.09	41.09	27.96	30.25	28.42	28.66	19.80	19.83



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR BI-DIRECTIONAL COUPLER WITHOUT INTERNAL TRANSFORMERS AND RESISTORS.

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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