

# Bi-Directional Coupler

## ZBDC25-2575W+

50Ω Up to 20W 1270 to 2575 MHz

### Maximum Ratings

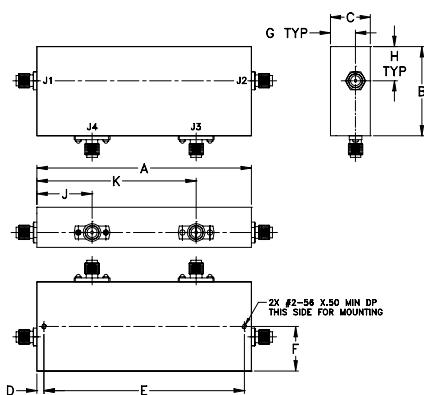
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	2.5A

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
95.25	39.62	17.78	3.18	88.90	19.81
G	H	J	K	wt	
.44	.60	.97	2.78	grams	
11.18	15.24	24.64	70.61	130.0	

### Features

- wide frequency range, 1270 to 2575 MHz
- good coupling flatness, ±0.1 dB typ over 1700-2200 MHz
- high directivity, 30 dB typ.
- very good VSWR, 1.05:1 typ.
- high power, 20W
- DC Current through input to output 2.5A Max. at 1.0 watt RF input.

### Applications

- GPS
- PCS
- LAB use

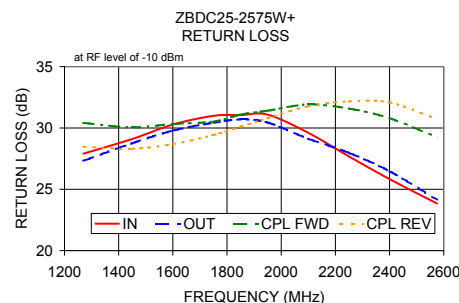
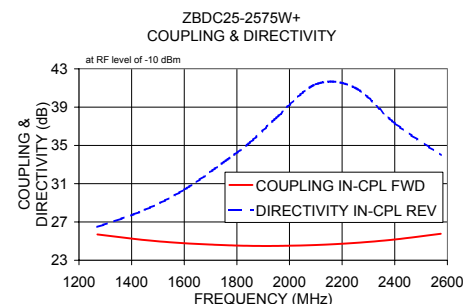
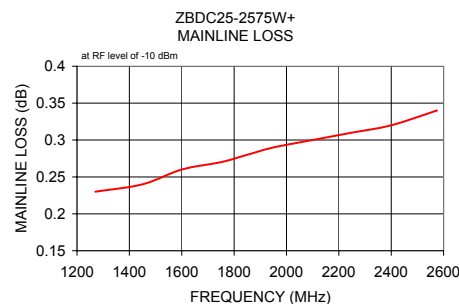
### Bi-Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT (W)
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		
1270-2575	24.9±1.1	±0.8	0.3	0.4	28	20	1.05	20
1700-2200	24.3±0.5	±0.3	0.3	0.45	30	24	1.05	20

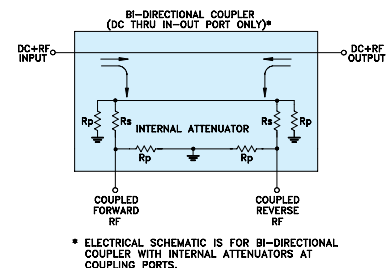
1. Mainline loss includes theoretical power loss at coupled port.

### 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
1270.00	0.23	25.70	25.71	25.63	26.48	27.91	27.32	30.41	28.47
1450.00	0.24	25.11	25.13	27.14	28.26	29.10	28.76	30.05	28.31
1600.00	0.26	24.78	24.79	28.20	30.37	30.28	29.78	30.32	28.69
1750.00	0.27	24.58	24.59	29.08	33.25	30.99	30.43	30.52	29.43
1850.00	0.28	24.51	24.53	29.48	35.31	31.05	30.69	31.09	30.11
1950.00	0.29	24.50	24.53	29.90	37.88	31.08	30.44	31.41	30.80
2100.00	0.30	24.59	24.61	29.04	41.38	29.61	29.12	31.92	31.77
2250.00	0.31	24.81	24.82	27.73	41.01	27.68	27.97	31.58	32.17
2400.00	0.32	25.17	25.16	26.36	37.32	25.83	26.47	30.79	32.08
2575.00	0.34	25.77	25.75	24.33	33.99	23.84	24.15	29.24	30.72



### Electrical Schematic



### 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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