

DC Pass

# Bi-Directional Coupler

## ZABDC10-25HP

50Ω Up to 10W 1500 to 2500 MHz

### Maximum Ratings

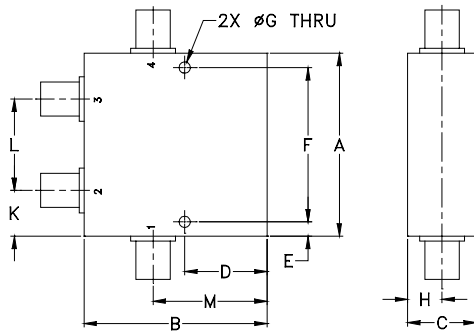
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	3.0A

\* Case temperature is defined as temperature on ground leads.  
Permanent damage may occur if any of these limits are exceeded.

### Coaxial Connections

INPUT	1
OUTPUT	4
COUPLED (forward)	2
COUPLED (reverse)	3

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
2.00	2.00	.75	.90	.156	1.688	.125
50.80	50.80	19.05	22.86	3.96	42.88	3.18
H	J	K	L	M	wt	
.38	---	.50	1.00	1.25	grams	
9.65	---	12.70	25.40	31.75	145	

### Features

- excellent directivity, 26 dB typ.
- low mainline loss, 0.55 dB typ.
- high power, up to 10W
- rugged shielded case
- DC Current through input to output 3.0A Max. at 1.0 Watt RF input power.

### Applications

- PCS/DCS/UMTS
- power leveling & monitoring
- VSWR measurement

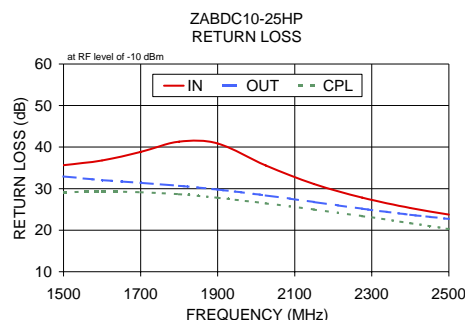
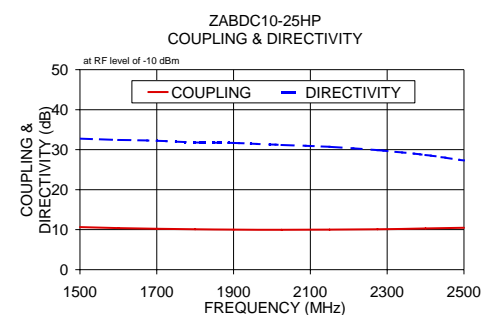
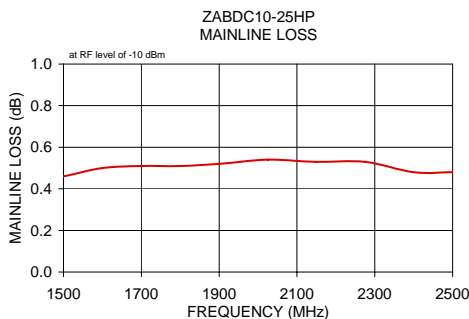
### Bi-Directional Coupler Electrical Specifications

FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT (W)
	Norm.	Flatness	Typ.	Max.	Typ.	Min.		
$f_L$ - $f_U$								
1500-2500	10.0±1.0	±0.5	0.55	0.9	26	18	1.1	10

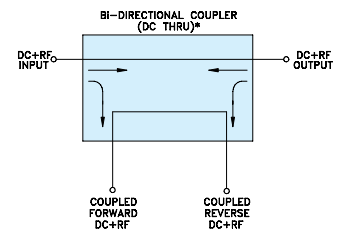
1. Mainline loss includes theoretical power loss at coupled port.

### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)		Coupling (dB)	Directivity (dB)	Return Loss (dB)		
	In-Out	In-Cpl			In	Out	Cpl
1500.00	0.46	10.63	32.78	35.66	32.94	29.14	
1600.00	0.50	10.40	32.41	36.80	32.04	29.28	
1700.00	0.51	10.22	32.23	38.86	31.39	29.14	
1800.00	0.51	10.10	31.80	41.30	30.68	28.63	
1900.00	0.52	10.02	31.67	40.85	29.79	27.81	
2025.00	0.54	9.97	31.18	35.57	28.38	26.47	
2150.00	0.53	10.01	30.70	31.10	26.78	24.97	
2275.00	0.53	10.12	29.90	27.82	25.17	23.39	
2400.00	0.48	10.30	28.68	25.32	23.70	21.69	
2500.00	0.48	10.49	27.31	23.74	22.69	20.27	



### Electrical Schematic



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

For detailed performance specs & shopping online see web site



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

REV. C  
M119986  
ZABDC10-25HP  
WP/TD/CP/AM  
090915