

# 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

### 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



CASE STYLE: DD477

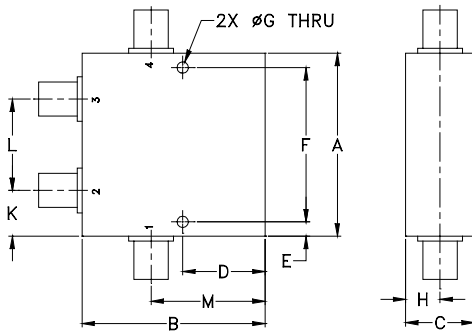
Connectors Model  
SMA ZABDC10-25HP-S

### 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.

### Outline Drawing

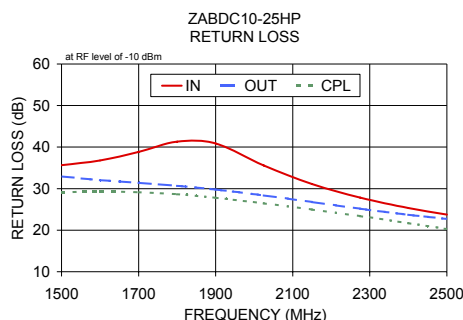
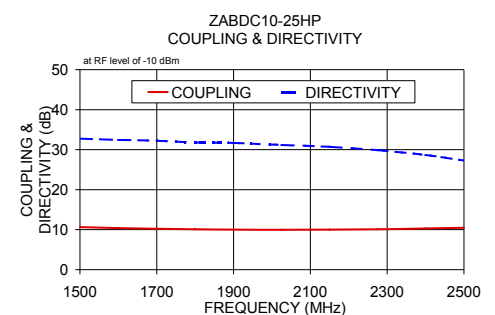
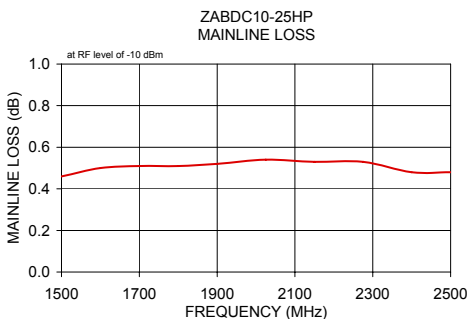


### Outline Dimensions (inch/mm)

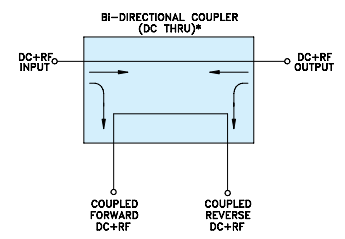
A	B	C	D	E	F	G	
2.00	2.00	.75	.90	.156	1.688	.125	
50.80	50.80	19.05	22.86	3.96	42.88	3.18	
H	J	K	L	M		wt	
.38	---	.50	1.00	1.25		grams	
9.65	---	12.70	25.40	31.75		145	

### 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.

### 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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