

DC Pass

# Bi-Directional Coupler

## ZABDC20-2400-S+

50Ω Up to 10W 1500 to 2400 MHz



Generic photo used for illustration purposes only

CASE STYLE: DD477

Connectors Model  
SMA ZABDC20-2400-S+

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	1.0A

\* 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, 25 dB typ.
- low mainline loss, 0.3 dB typ.
- high power, up to 10W
- rugged shielded case
- DC current through input to output 1.0A Max. at 1.0 watt RF input power.

### Applications

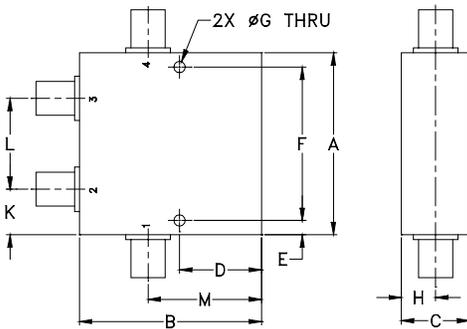
- PCS/DCS/UMTS
- power leveling & monitoring
- VSWR measurement

### 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.		
$f_L$ - $f_U$								
1500-2400	19.5±1.0	±1.0	0.3	0.5	25	18	1.2	10

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

### Outline Drawing



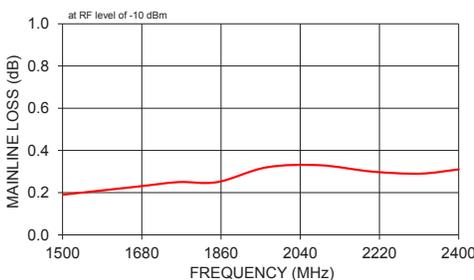
### Outline Dimensions (inch/mm)

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	

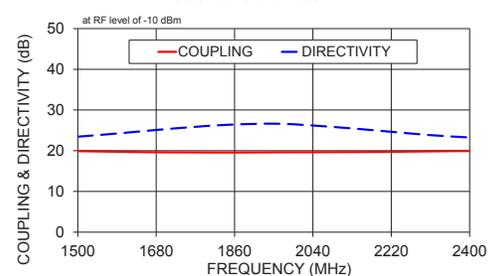
### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)		Coupling (dB)	Directivity (dB)	Return Loss (dB)		
	In-Out	In-Cpl			In	Out	Cpl
1500.00	0.19	19.90	19.90	23.45	27.51	28.35	24.98
1588.00	0.21	19.75	19.75	24.21	28.25	29.14	25.69
1676.00	0.23	19.63	19.63	25.06	29.19	30.06	26.19
1764.00	0.25	19.59	19.59	25.82	30.29	31.05	26.11
1852.00	0.25	19.56	19.56	26.41	31.74	32.30	25.22
1964.00	0.32	19.62	19.62	26.62	34.28	34.41	23.34
2084.00	0.33	19.65	19.65	25.86	38.45	37.76	21.21
2202.00	0.30	19.71	19.71	24.82	43.89	43.16	19.38
2312.00	0.29	19.85	19.85	23.81	42.07	48.30	18.05
2400.00	0.31	19.93	19.93	23.26	38.87	48.51	17.31

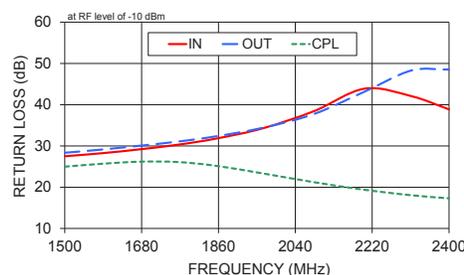
ZABDC20-2400-S+ MAINLINE LOSS



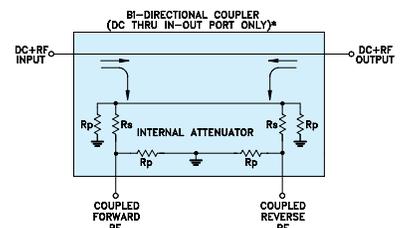
ZABDC20-2400-S+ COUPLING & DIRECTIVITY



ZABDC20-2400-S+ RETURN LOSS



### Electrical Schematic



\* ELECTRICAL SCHEMATIC IS FOR BI-DIRECTIONAL COUPLER WITH INTERNAL ATTENUATORS AT COUPLING PORTS.

### 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.
- The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

