

DC to 10 MHz Pass

Bi-Directional Coupler

ZABDC20-232H+

50Ω Up to 50W 800 to 2300 MHz



Maximum Ratings

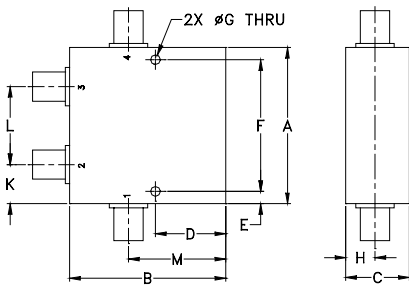
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	2.0 A

* 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	.88	.90	.156	1.688	.125			
50.80	50.80	22.35	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			225		

Features

- excellent mainline loss, 0.25 dB typ.
- excellent directivity, 23 dB typ.
- high power, up to 50W
- rugged shielded case
- DC current through input to output 2.0A Max. at 50 watt RF input power
- 10 MHz pass through

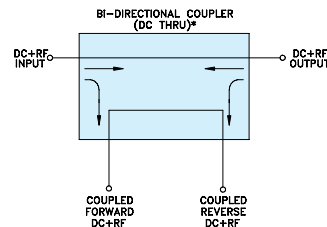
Applications

- L Band
- PCS/DCS/UMTS
- power leveling & monitoring
- VSWR measurement
- satellite communication

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Units
Frequency Range		800		2300	MHz
Mainline Loss (above theoretical 0.05 dB)	800-2300	—	0.23	0.35	dB
	950-1250	—	0.17	0.30	
	1700-2050	—	0.21	0.35	
	950-2150	—	0.22	0.35	
Coupling	800-2300	—	20.5±1.5	—	dB
	950-1250	—	20.5±1.0	—	
	1700-2050	—	19.5±0.8	—	
	950-2150	—	20.5±1.2	—	
Coupling Flatness (±)	800-2300	—	1.5	1.9	dB
	950-1250	—	0.7	0.9	
	1700-2050	—	0.5	0.7	
	950-2150	—	1.0	1.3	
Directivity	800-2300	17	20	—	dB
	950-1250	18	20	—	
	1700-2050	19	23	—	
	950-2150	18	20	—	
Return Loss (Input)	800-2300	18	23	—	dB
	950-1250	18	23	—	
	1700-2050	20	24	—	
	950-2150	18	23	—	
Return Loss (Output)	800-2300	18	23	—	dB
	950-1250	18	23	—	
	1700-2050	20	25	—	
	950-2150	18	23	—	
Return Loss (Coupling)	800-2300	16	19	—	dB
	950-1250	17	19	—	
	1700-2050	16	20	—	
Input Power	800-2300	—	—	50	W

Electrical Schematic



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

CASE STYLE: DD477-1

Connectors	Model	Price	Qty.
SMA	ZABDC20-232H-S+	\$119.95	(1-9)
N-Type	ZABDC20-232H-N+	\$129.95	(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)		Coupling (dB)		Directivity (dB)		Return Loss (dB)		
	In-Out	In-Cpl Fwd	Out-Cpl Rev	Out-Cpl Fwd	In-Cpl Rev	In	Out	Cpl Fwd	Cpl Rev
800.00	0.14	22.19	22.18	20.87	20.60	25.12	25.06	22.48	22.54
950.00	0.16	21.10	21.09	21.04	20.91	24.16	24.04	21.21	21.44
1100.00	0.19	20.29	20.27	21.70	21.72	23.65	23.62	20.37	20.62
1250.00	0.20	19.67	19.66	22.84	23.00	23.74	23.78	19.94	20.17
1500.00	0.22	19.08	19.09	24.24	24.44	24.98	24.97	20.11	20.35
1700.00	0.23	18.98	18.97	24.82	24.88	27.55	27.56	21.72	21.83
1950.00	0.23	19.27	19.27	24.65	24.03	37.97	37.62	26.69	26.61
2050.00	0.23	19.54	19.53	24.19	23.74	49.29	39.04	30.82	30.31
2150.00	0.23	19.92	19.90	24.15	23.44	34.53	33.03	37.03	35.01
2300.00	0.24	20.69	20.68	23.47	22.50	27.11	26.92	30.45	29.88

