

DC Pass Bi-Directional Coupler

ZABDC20-182H-S+

50Ω Up to 100W 700 to 1800 MHz

Maximum Ratings

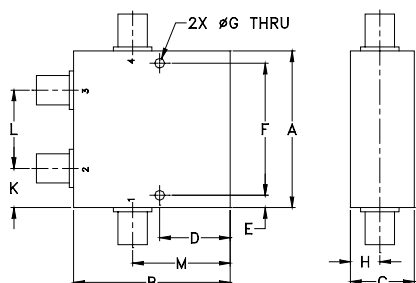
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	2.0 A

* 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, 0.2 dB typ.
- excellent directivity, 25 dB typ.
- high power, up to 100W
- rugged shielded case
- DC current through input to output 2.0A Max. at 50 watt RF input power

Applications

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

Bi-Directional Coupler Electrical Specifications

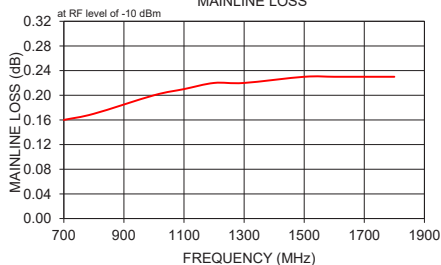
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT (W)
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		
f_L - f_U								
700-1800			0.20	0.35	25	19	1.08	50
800-1000	20.5±1.0	±0.75	0.20	0.30	23	20	1.08	100
1000-1600	19.5±0.8	±0.6	0.25	0.35	27	20	1.08	50
1600-1800	20.0±1.0	±0.6	0.25	0.35	25	19	1.08	50

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

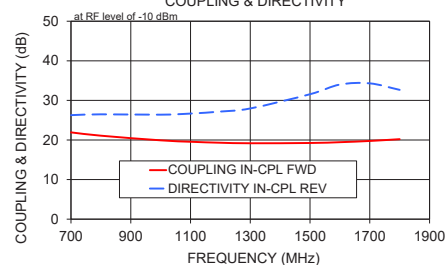
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)		Coupling (dB)		Directivity (dB)		Return Loss (dB)			
	In-Out	In-Cpl Fwd	In-Cpl Rev	Out-Cpl Rev	Out-Cpl Fwd	In-Cpl Rev	In	Out	Cpl Fwd	Cpl Rev
700.00	0.16	21.92	21.94	26.35	26.27	31.61	32.26	30.98	30.09	28.43
800.00	0.17	21.08	21.10	26.19	26.48	30.98	31.61	29.43	28.43	26.13
1000.00	0.20	19.91	19.93	25.90	26.39	30.35	30.95	27.18	26.13	25.28
1100.00	0.21	19.55	19.57	25.96	26.67	30.39	30.81	26.42	25.28	24.71
1200.00	0.22	19.30	19.32	26.55	27.18	30.40	30.67	25.87	24.71	24.35
1300.00	0.22	19.17	19.19	27.47	27.96	30.69	30.65	25.48	24.35	24.02
1500.00	0.23	19.24	19.25	29.96	31.56	32.22	31.59	25.11	24.02	24.09
1600.00	0.23	19.44	19.46	31.28	34.00	34.08	32.70	25.11	24.09	24.21
1700.00	0.23	19.75	19.77	30.63	34.30	36.77	34.05	25.28	24.21	24.47
1800.00	0.23	20.20	20.22	29.13	32.66	41.59	35.13	25.53	24.47	

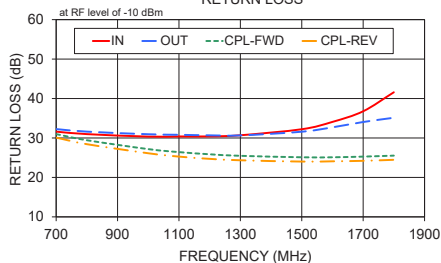
ZABDC20-182H-S+ MAINLINE LOSS



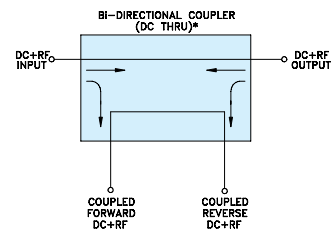
ZABDC20-182H-S+ COUPLING & DIRECTIVITY



ZABDC20-182H-S+ RETURN LOSS



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.
- 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/WCLStore/terms.jsp

