

High Power Bi-Directional Coupler

50Ω Up to 100W 0.4 to 15 MHz

ZABDC50-150HP+

Maximum Ratings

Operating Temperature	-55°C to 75°C
Storage Temperature	-55°C to 100°C
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

INPUT	1 (N-Type)
OUTPUT	4 (N-Type)
COUPLED (forward)	2 (SMA)
COUPLED (reverse)	3 (SMA)

Features

- good coupling flatness, 0.5 dB typ.
- high directivity, 30 dB typ.
- excellent VSWR, 1.03:1 typ.
- high power, up to 100W
- extremely low insertion loss, 0.01 dB typ.

Applications

- HF radios
- AM radio, amateur radio, medical ultrasound



CASE STYLE: HHH141

Connectors	Model
N-Type/SMA	ZABDC50-150HP+

+RoHS Compliant

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

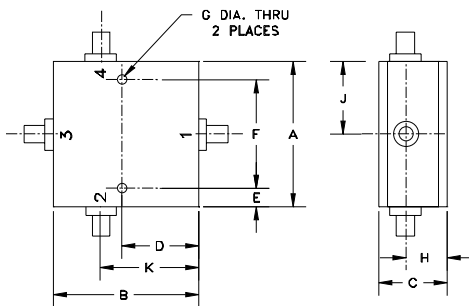
Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		0.4	—	15	MHz
Mainline Loss	0.4-15	—	0.01	0.1	dB
Coupling	0.4-15	49	50	51.5	dB
Coupling Flatness(±)	0.4-15	—	0.5	—	dB
Directivity	0.4-15	20	30	—	dB
Return Loss (Input)	0.4-15	22	33	—	dB
Return Loss (Output)	0.4-15	22	33	—	dB
Return Loss (Coupling)	0.4-15	27	36	—	dB
Input Power		—	—	100	W

Typical Performance Data

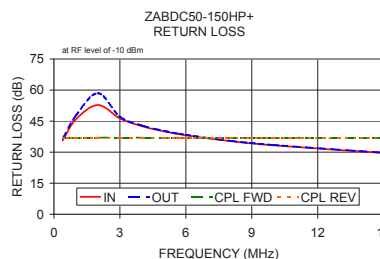
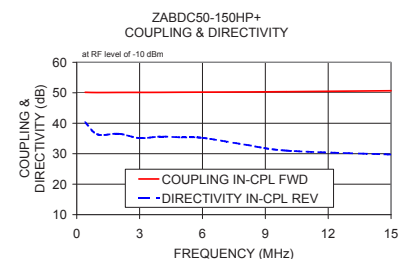
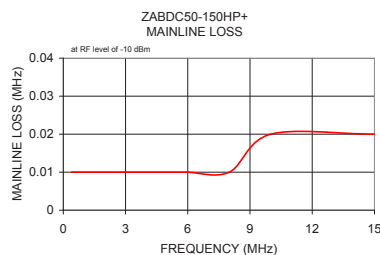
Frequency (MHz)	Mainline Loss (dB)	Coupling (dB)		Directivity (dB)		Return Loss (dB)			
		In-Out	In-Cpl Fwd	Out-Cpl Rev	Out-Cpl Fwd	In-Cpl Rev	In	Out	Cpl Fwd
0.40	0.01	50.15	50.10	32.18	40.29	35.74	36.52	37.04	36.94
1.00	0.01	50.08	50.10	35.11	36.32	45.88	47.67	37.03	36.94
2.00	0.01	50.11	50.11	35.65	36.55	52.79	58.48	37.03	36.94
3.00	0.01	50.12	50.13	35.04	35.13	46.31	47.13	37.04	36.92
4.00	0.01	50.14	50.12	35.59	35.62	42.55	42.92	37.02	36.88
5.00	0.01	50.18	50.16	35.68	35.36	40.05	40.33	37.02	36.87
6.00	0.01	50.20	50.16	35.44	35.20	38.16	38.38	37.00	36.84
8.00	0.01	50.26	50.24	35.34	33.02	35.36	35.53	36.98	36.79
10.00	0.02	50.36	50.36	36.11	31.02	33.30	33.45	36.97	36.76
15.00	0.02	50.67	50.61	34.91	29.72	29.59	29.73	36.92	36.64

Outline Drawing

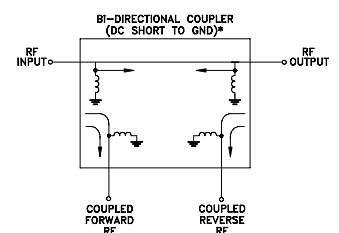


Outline Dimensions (inch/mm)

A	B	C	D	E	F
2.00	2.00	.95	1.062	.125	1.75
50.80	50.80	24.13	26.97	3.18	44.45
G	H	J	K	wt	
.125	.575	1.00	1.35	grams	
3.18	14.61	25.40	34.29	200	



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR BI-DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) THAT ROUTES DC FROM RF PORTS TO GROUND.

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-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/MCStore/terms.jsp



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