

High Power Bi-Directional Coupler

50Ω Up to 100W 0.4 to 15 MHz

ZABDC50-150HP+



Generic photo used for illustration purposes only
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

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

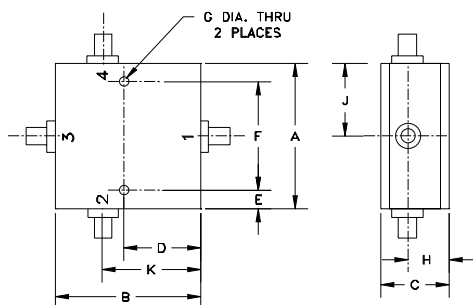
Electrical Specifications at 25°C

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

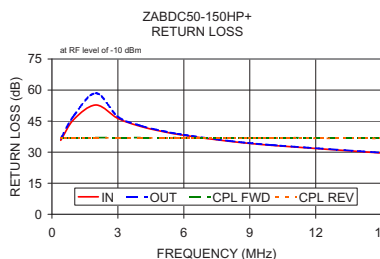
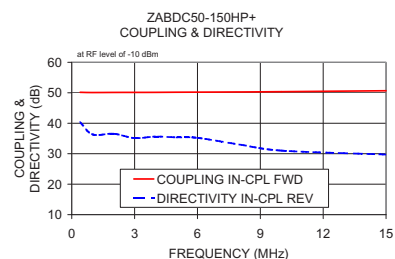
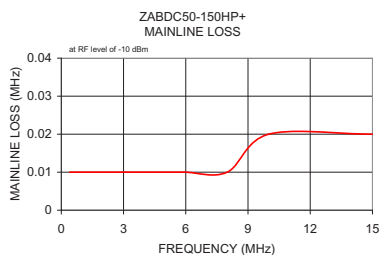
Frequency (MHz)	Mainline Loss (dB)	Coupling (dB)		Directivity (dB)		Return Loss (dB)			
		In-Out	In-Cpl Fwd	Out-Cpl Rev	Out-Cpl Fwd	In-Cpl Rev	In	Out	Cpl Fwd
0.40	0.01	50.15	50.10	32.18	40.29	35.74	36.52	37.04	36.94
1.00	0.01	50.08	50.10	35.11	36.32	45.88	47.67	37.03	36.94
2.00	0.01	50.11	50.11	35.65	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

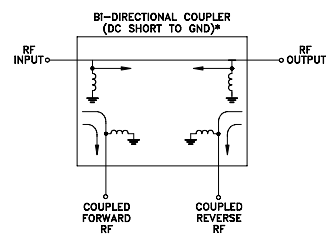


Outline Dimensions (inch/mm)

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.
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