

Coaxial Bi-Directional Coupler

ZFBDC20-61HP+

50Ω Up to 25W 1 to 60 MHz

Maximum Ratings

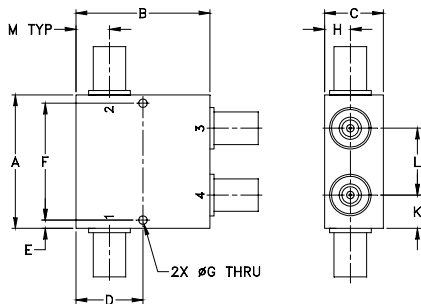
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED (forward)	4
COUPLED (reverse)	3

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
2.00	2.00	.88	1.000	0.13	1.750	0.125
50.80	50.80	22.35	25.40	3.30	44.45	3.18

H	J	K	L	M	wt
0.38	--	0.50	1.00	0.50	grams
9.65	--	12.70	25.40	12.70	250.0

Features

- excellent mainline loss, 0.1 dB typ.
- excellent directivity, 30 dB typ.
- rugged shielded case

Applications

- military mobile
- instrumentation
- communication receivers & transmitters



SMA version shown
CASE STYLE: JD1252

Connectors	Model	Price	Qty.
BNC	ZFBDC20-61HP+	\$61.95	(1-9)
SMA	ZFBDC20-61HP-S+	\$66.95	(1-9)
N-Type	ZFBDC20-61HP-N+	\$66.95	(1-9)

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

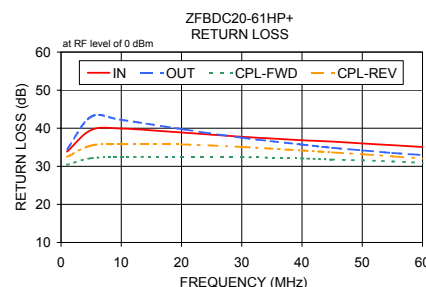
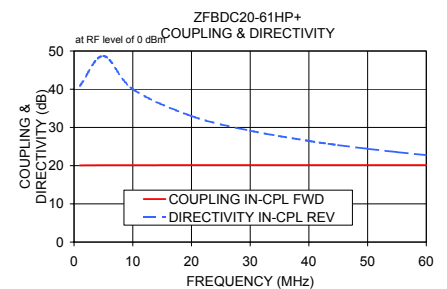
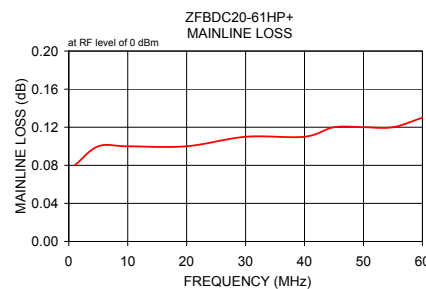
Bi-Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER ² INPUT (W)
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		
f_L - f_U								
1-60	20±0.6	±0.3	0.1	0.25	30	20	1.07	15
10-60	20±0.3	±0.3	0.1	0.25	30	20	1.07	25

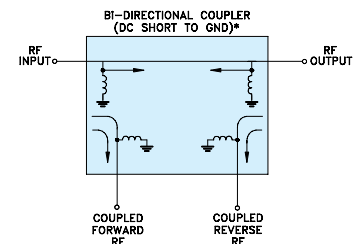
¹ Mainline loss includes theoretical power loss at coupled port.
² Over +55°C derate linearly to 50% of rating at 100°C.

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
1.00	0.08	20.08	20.03	20.03	40.68	40.91	33.84	34.40	30.40	32.48
5.00	0.10	20.11	20.03	20.03	47.05	48.68	39.54	43.04	32.12	35.46
10.00	0.10	20.12	20.05	20.05	39.21	40.02	39.93	42.19	32.38	35.79
20.00	0.10	20.13	20.06	20.06	32.28	32.98	38.88	39.77	32.57	35.75
30.00	0.11	20.14	20.08	20.08	28.66	29.14	37.76	37.50	32.42	35.08
40.00	0.11	20.14	20.09	20.09	26.16	26.48	36.85	35.71	32.07	34.15
45.00	0.12	20.14	20.10	20.10	25.16	25.38	36.49	34.87	31.76	33.67
50.00	0.12	20.14	20.11	20.11	24.21	24.42	36.01	34.20	31.56	33.18
55.00	0.12	20.14	20.11	20.11	23.38	23.54	35.56	33.51	31.27	32.62
60.00	0.13	20.13	20.12	20.12	22.58	22.74	35.07	32.95	30.90	32.05



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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