

Coaxial Bi-Directional Coupler

50Ω Up to 25W 1 to 60 MHz

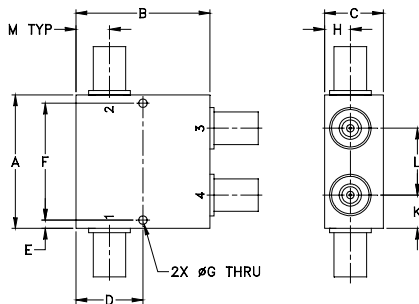
Maximum Ratings

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)

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

ZFBDC20-61HP+



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

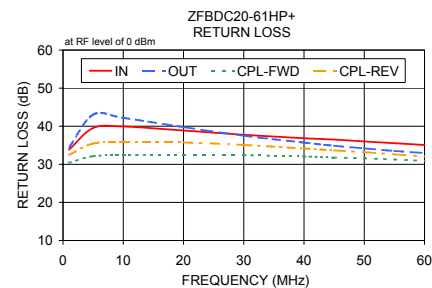
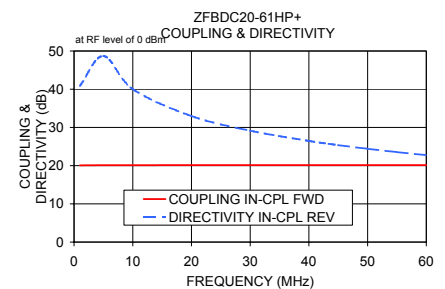
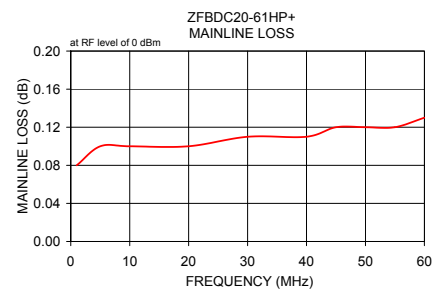
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER ² INPUT (W)
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		
1-60	20±0.6	±0.3	0.1	0.25	30	20	1.07	15
10-60	20±0.3	±0.3	0.1	0.25	30	20	1.07	25

¹ Mainline loss includes theoretical power loss at coupled port.

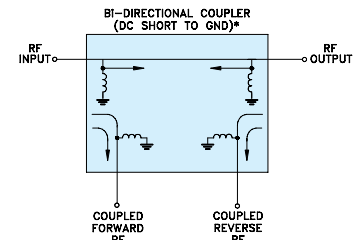
² Power rating is specified up to +55°C. Power Input Specifications at +100°C is 50% value at +55°C. For specifications limits between +55°C and +100°C, derate linearly.

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

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. 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/MCLStore/terms.jsp



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