



COAXIAL

Bi-Directional Coupler ZFBDC20-61HP+

50Ω Up to 25W 1 to 60 MHz

FEATURES

- Excellent mainline loss, 0.1 dB typ.
- Excellent directivity, 30 dB typ.
- Rugged shielded case

APPLICATIONS

- Military mobile
- Instrumentation
- Communication receivers & transmitters



Generic photo used for illustration purposes only
CASE STYLE: JD1252

Connectors	Model
BNC	ZFBDC20-61HP+
SMA	ZFBDC20-61HP-S+
N-TYPE	ZFBDC20-61HP-N+

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

ELECTRICAL SPECIFICATIONS

Parameter	Frequency (MHz)	Frequency (MHz)			Units
		Min.	Typ.	Max.	
Frequency Range		1		60	MHz
Mainline Loss ¹	1-60		0.1	0.25	dB
	10-60		0.1	0.25	
Coupling Nominal	1-60		20±0.6		dB
	10-60		20±0.3		
Coupling Flatness (±)	1-60		±0.3		dB
	10-60		±0.3		
Directivity	1-60	20	30		dB
	10-60	20	30		
VSWR	1-60		1.07		:1
	10-60		1.07		
Input Power ²	1-60			15	W
	10-60			25	

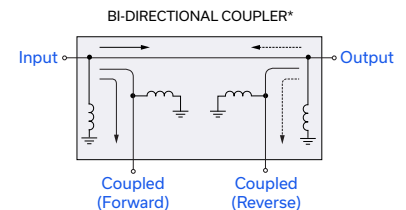
1. Mainline loss includes theoretical power loss at coupled port.
2. Power rating is specified up to +55°C. Power Input Specifications at +100°C is 50% value at +55°C. For specifications limits between +55°C and +100°C, derate linearly.

MAXIMUM RATINGS

Parameter	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.

ELECTRICAL SCHEMATIC



*Electrical schematic is for Bi-Directional coupler with internal transformer(s) that routes DC from all ports to ground





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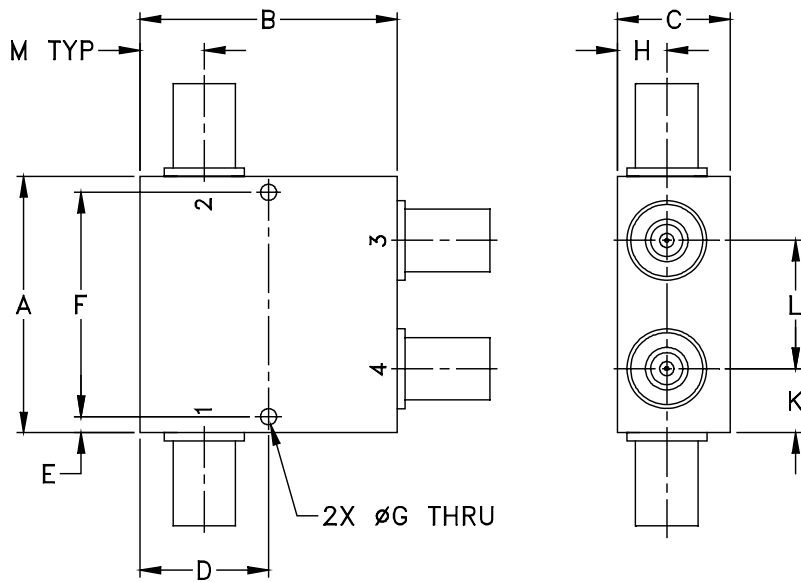
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COAXIAL CONNECTIONS

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	





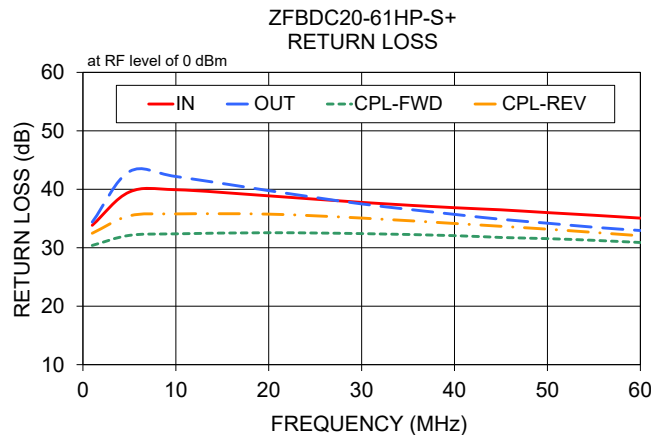
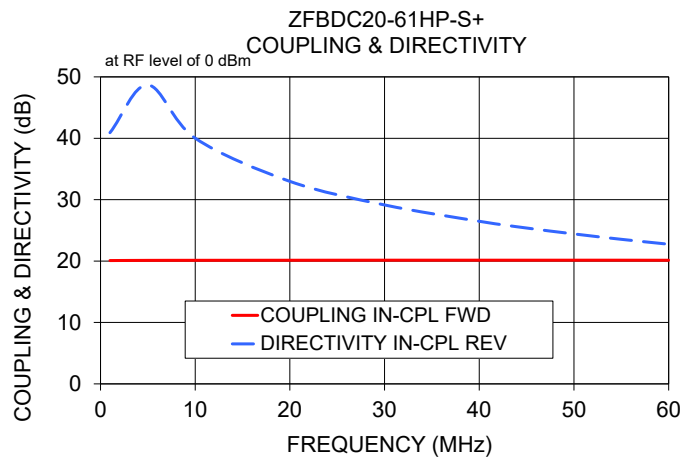
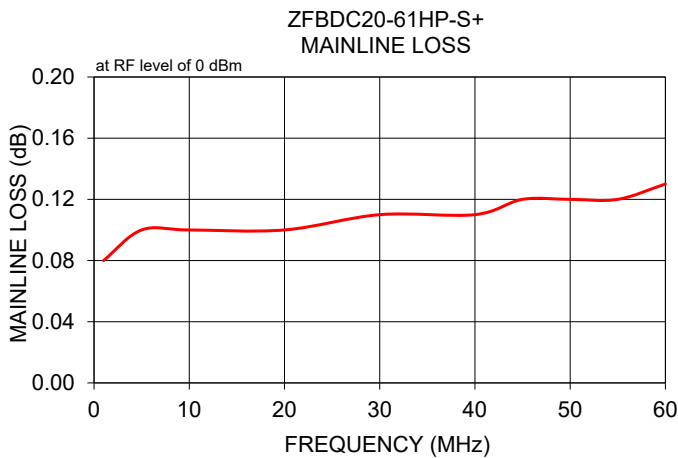
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TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB)		Directivity (dB)		Return Loss (dB)			
		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



- 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/terms/viewterm.html

