

Coaxial Bi-Directional Coupler

50Ω Up to 20W 40 to 1000 MHz

ZFBDC20-13HP+



SMA version shown
CASE STYLE: JD1252

Connectors	Model	Price	Qty.
BNC	ZFBDC20-13HP+	\$70.95	(1-9)
SMA	ZFBDC20-13HP-S+	\$75.95	(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Maximum Ratings

Operating Temperature -55°C to 100°C

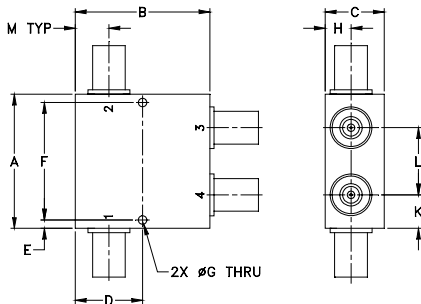
Storage Temperature -55°C to 100°C

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, 0.4 dB typ.
- excellent directivity, 23 dB typ.
- high power, up to 20W
- rugged shielded case

Applications

- power leveling & monitoring
- GPS
- cellular/PCS

Bi-Directional Coupler Electrical Specifications

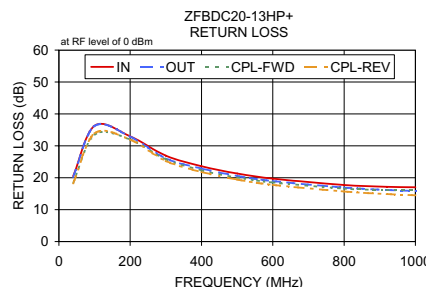
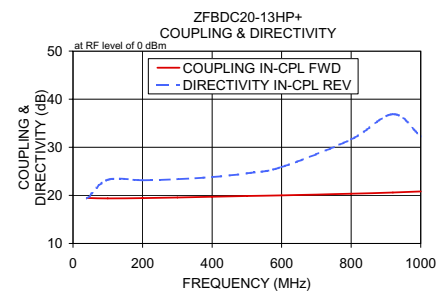
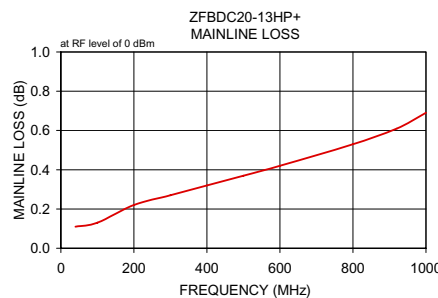
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER ² INPUT (W)
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		
f_L - f_U								
40-1000	20±0.5	±1.2	0.6	1.0	22	16	1.20	10
800-1000	20.5±0.7	±0.5	0.6	1.0	23	16	1.30	10
40-500	19.5±0.5	±0.5	0.3	0.6	25	16	1.10	20

¹ Mainline loss includes theoretical power loss at coupled port.

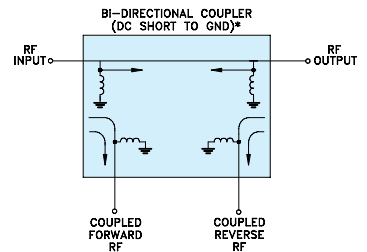
² Over +55°C derate linearly to 50% of rating at 100°C.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)		Coupling (dB)		Directivity (dB)		Return Loss (dB)		
	In-Out	In-Cpl Fwd	Out-Cpl Rev	Out-Cpl Fwd	In-Cpl Rev	In	Out	Cpl Fwd	Cpl Rev
40.00	0.11	19.45	19.63	18.97	19.34	20.48	20.24	18.42	18.26
100.00	0.13	19.37	19.43	25.87	23.24	36.29	36.23	33.44	33.87
200.00	0.22	19.44	19.61	30.40	23.15	32.98	32.87	31.98	31.96
300.00	0.27	19.57	19.77	33.08	23.36	26.91	26.08	25.78	25.27
400.00	0.32	19.71	19.96	37.14	23.79	23.58	22.88	22.34	21.82
500.00	0.37	19.86	20.14	46.58	24.59	21.33	20.59	20.10	19.44
600.00	0.42	20.00	20.32	38.80	25.89	19.73	18.94	18.52	17.77
800.00	0.53	20.34	20.68	26.00	31.65	17.74	16.92	16.61	15.68
920.00	0.61	20.61	20.89	21.83	36.88	17.18	16.15	16.16	14.86
1000.00	0.69	20.83	21.08	19.32	32.27	17.01	15.83	16.08	14.52



Electrical Schematic



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

For detailed performance specs & shopping online see web site

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