

Coaxial Bi-Directional Coupler

ZFBDC20-970HP

50Ω Up to 10W 860 to 970 MHz



Maximum Ratings

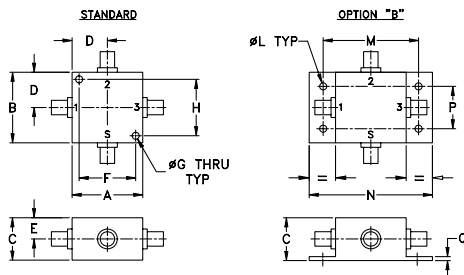
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

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

Coaxial Connections

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

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	wt
1.25	1.25	.75	.63	.38	1.000	.125	1.000	--	--	.125	1.688	2.18	.75	.07	grams
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40	--	--	3.18	42.88	55.37	19.05	1.78	75.0

For option B with N-Type connectors, dimension "C" increases to 0.94 inches.

Features

- very low mainline loss, 0.1 dB typ.
- excellent directivity, 28 dB typ.
- excellent VSWR, 1.1: typ.
- high power operation, 10W

Applications

- VSWR measurement
- power monitoring of cellular transmitters
- power levelling

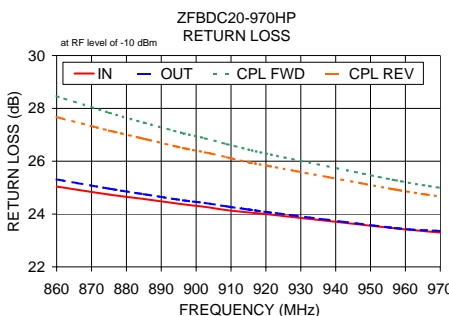
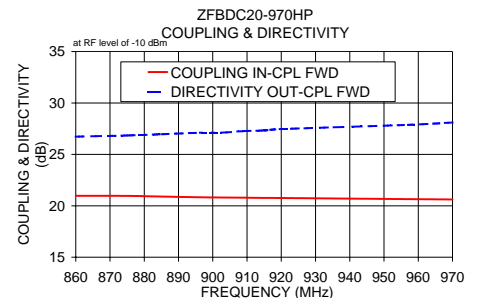
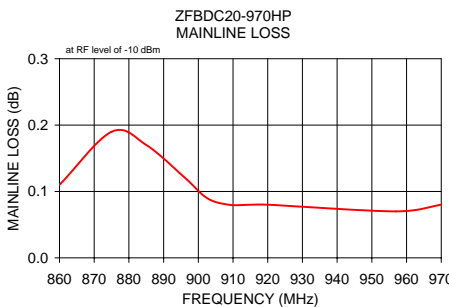
Bi-Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT (W)	
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		Typ.	L Max.
f _L -f _H									
860-970	20.4±0.6	±0.6	0.1	0.4	28	20	1.1	10	10

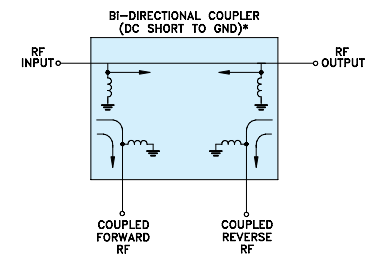
1. Mainline loss includes theoretical power loss at coupled port.

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
860.00	0.11	20.97	21.06	26.72	22.08	25.04	25.31	28.46	27.67
875.00	0.19	20.96	21.06	26.84	21.99	24.74	24.96	27.84	27.16
885.00	0.17	20.90	21.01	26.96	21.92	24.57	24.75	27.46	26.85
896.25	0.12	20.83	20.95	27.11	21.92	24.37	24.52	27.06	26.50
902.50	0.09	20.81	20.93	27.12	21.84	24.27	24.42	26.87	26.34
908.75	0.08	20.79	20.90	27.26	21.83	24.15	24.29	26.65	26.15
915.00	0.08	20.77	20.89	27.33	21.78	24.06	24.17	26.44	25.96
920.00	0.08	20.76	20.87	27.46	21.77	24.00	24.08	26.29	25.84
957.00	0.07	20.65	20.76	27.87	21.87	23.46	23.47	25.28	24.93
970.00	0.08	20.62	20.73	28.10	21.55	23.30	23.36	24.99	24.66



Electrical Schematic



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

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 ISO 9001 ISO 14001 AS 9100 CERTIFIED
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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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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