

Coaxial Directional Coupler

50Ω

25 to 400 MHz

ZDC-20-1



Maximum Ratings

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

Coaxial Connections

INPUT	3
OUTPUT	2
COUPLED	1

Features

- excellent directivity, 35 dB typ.
- excellent mainline loss, 0.3 dB typ.
- high input power, up to 5W max.
- rugged shielded case

Applications

- VHF/HF
- instrumentation
- communication receivers & transmitters
- amateur radio

CASE STYLE: M22

Connectors	Model	Price	Qty.
BNC	ZDC-20-1	\$51.95 ea.	(1-9)
BRACKET (OPTION "B")		\$5.00	(1+)
BRACKET (OPTION "BR")		\$1.50	(1+)

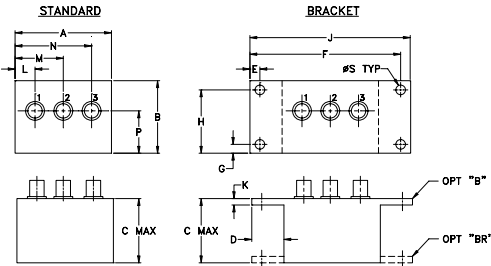
Directional Coupler Electrical Specifications

FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)		
	Nom.	Flatness	L		M		U		L		M		U			Typ.	L	MU
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
25-400	20±0.5	±0.5	0.2	0.25	0.3	0.35	0.35	0.5	25	20	35	25	25	20	1.25	3.0	5.0	

L = 25-50 MHz M = 50-300 MHz U = 300-400 MHz

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

Outline Drawing



Outline Dimensions (inch/mm)

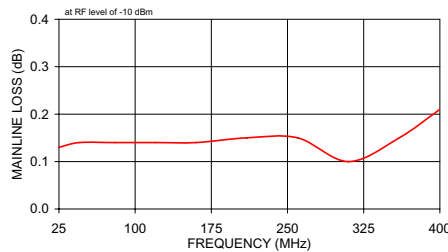
A	B	C	D	E	F	G	H
2.25	1.38	1.24	.50	.150	3.100	.138	1.238
57.15	35.05	31.50	12.70	3.81	78.74	3.51	31.45

J	K	L	M	N	P	S	wt
3.25	.10	.40	1.15	1.86	.64	.150	grams
82.55	2.54	10.16	29.21	47.24	16.26	3.81	74.0

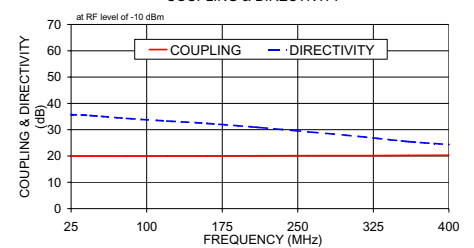
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)		Return Loss (dB)		Cpl
			In	Out	In	Out	
25.00	0.13	19.97	35.76	34.28	33.88	39.90	
45.00	0.14	19.98	35.38	33.99	31.38	38.66	
80.00	0.14	19.98	34.30	33.78	27.78	36.78	
120.00	0.14	20.01	33.33	34.16	24.90	35.11	
160.00	0.14	20.02	32.39	33.90	22.55	33.12	
210.00	0.15	20.08	30.90	34.23	20.48	31.35	
260.00	0.15	20.13	29.21	33.58	18.79	29.50	
310.00	0.10	20.15	27.48	32.70	17.46	28.08	
360.00	0.15	20.23	25.48	31.39	16.45	26.85	
400.00	0.21	20.28	24.37	29.89	15.74	26.00	

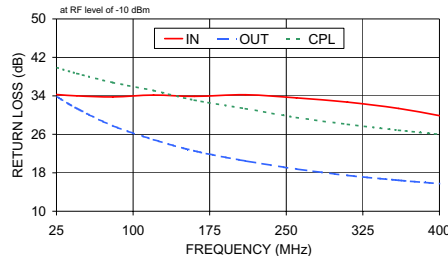
ZDC-20-1 MAINLINE LOSS



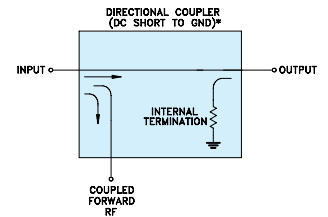
ZDC-20-1 COUPLING & DIRECTIVITY



ZDC-20-1 RETURN LOSS



Electrical Schematic



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The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS

REV. A
M119986
ZDC-20-1
WZ/TD/CP/AM
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