

Coaxial Directional Coupler

ZDC-20-1+ ZDC-20-1

50Ω

25 to 400 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	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+)

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

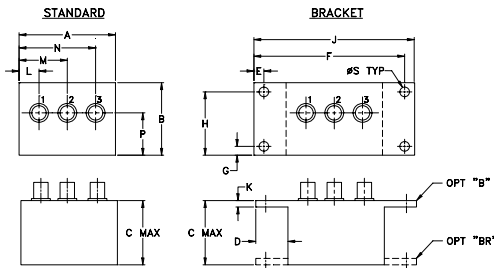
Directional Coupler Electrical Specifications

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)

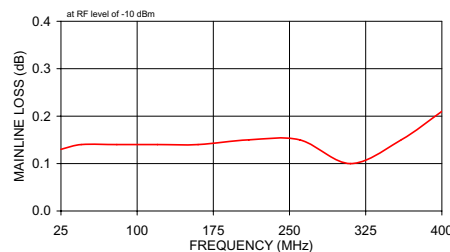
A	B	C	D	E	F	G	H
2.25	1.38	1.24	.50	.150	3.100	.138	1.238
57.15	35.05	31.50	12.70	3.81	78.74	3.51	31.45

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

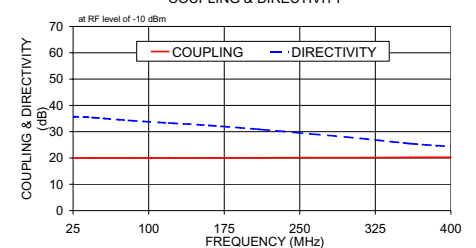
Typical Performance Data

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

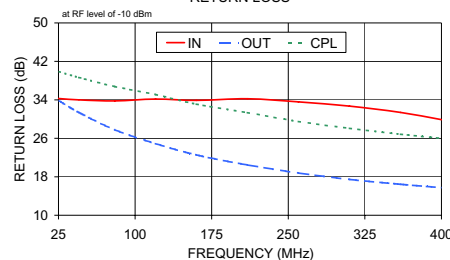
ZDC-20-1
MAINLINE LOSS



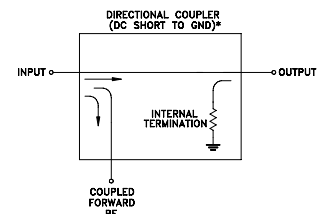
ZDC-20-1
COUPLING & DIRECTIVITY



ZDC-20-1
RETURN LOSS



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMERS THAT ROUTES DC FROM RF PORTS TO GROUND.

Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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