

Coaxial Directional Coupler

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

ZDC-20-1+



CASE STYLE: M22

Connectors	Model
BNC	ZDC-20-1+
BRACKET (OPTION "B")	
BRACKET (OPTION "BR")	

+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)	
			L		M		U		L		M		U				
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
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

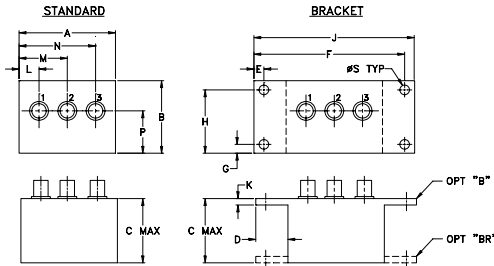
L = 25-50 MHz M = 50-300 MHz U = 300-400 MHz

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

Typical Performance Data

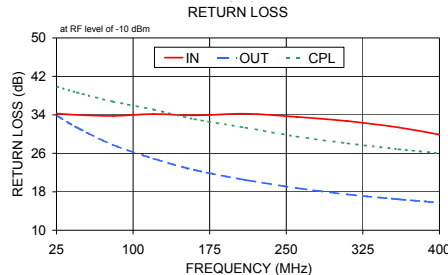
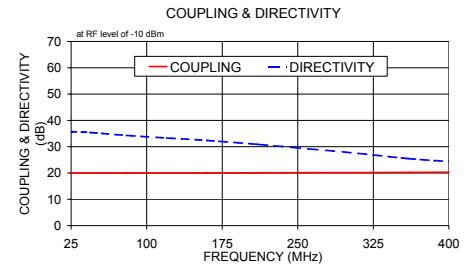
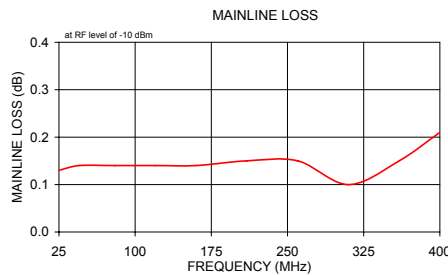
Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
25.00	0.13	19.97	35.76	34.28	33.88	39.90
45.00	0.14	19.98	35.38	33.99	31.38	38.66
80.00	0.14	19.98	34.30	33.78	27.78	36.78
120.00	0.14	20.01	33.33	34.16	24.90	35.11
160.00	0.14	20.02	32.39	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

Outline Drawing

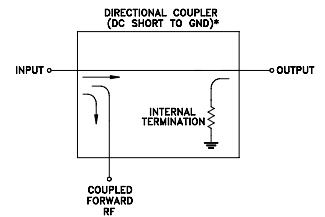


Outline Dimensions (inch)

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



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) 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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