

Coaxial Directional Coupler

75Ω

1 to 150 MHz

ZDC-20-3-75+
ZDC-20-3-75



Generic photo used for illustration purposes only

CASE STYLE: M22

Connectors	Model
BNC	ZDC-20-3-75(+)
BRACKET (OPTION "B")	
BRACKET (OPTION "BR")	

+RoHS Compliant

The +Suffix identifies 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	3
OUTPUT	2
COUPLED	1

Features

- excellent mainline loss, 0.35 dB typ.
- excellent directivity, 25 dB typ.
- rugged shielded case

Applications

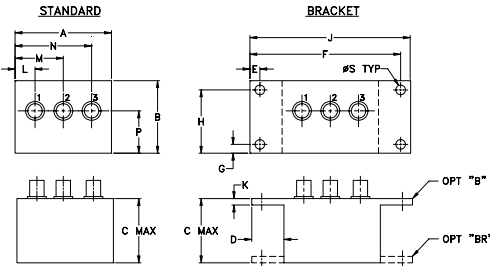
- HF/VHF
- instrumentation
- amateur radio

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.				
1-150	19.5±0.5	±0.75	0.35	0.8	0.35	0.8	0.35	0.8	25	20	25	20	25	20	2.0	2.0	4.0	

L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]
1. Mainline loss includes theoretical power loss at coupled port.

Outline Drawing



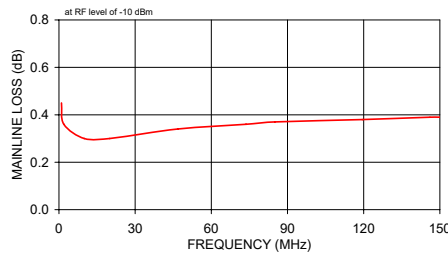
Outline Dimensions (inch/mm)

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

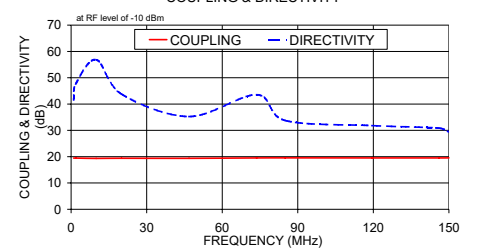
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
1.00	0.45	19.46	41.58	25.97	24.04	24.88
1.93	0.36	19.46	47.84	29.62	26.37	27.44
9.94	0.30	19.35	56.88	32.94	30.18	31.33
20.00	0.30	19.39	43.82	35.94	30.58	28.32
46.82	0.34	19.37	35.25	34.29	29.28	22.54
73.64	0.36	19.53	43.57	30.78	28.04	18.80
85.00	0.37	19.56	33.76	29.93	27.73	17.77
119.45	0.38	19.51	31.82	28.10	26.21	14.96
146.09	0.39	19.52	30.86	28.08	25.47	13.35
150.00	0.39	19.54	29.43	27.90	25.09	13.11

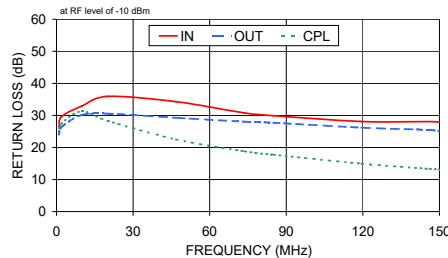
ZDC-20-3-75
MAINLINE LOSS



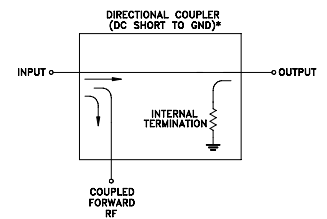
ZDC-20-3-75
COUPLING & DIRECTIVITY



ZDC-20-3-75
RETURN LOSS



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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