

Coaxial Directional Coupler

50Ω

0.2 to 250 MHz

ZDC-20-3



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, 33 dB typ.
- excellent mainline loss, 0.25 dB typ.
- rugged shielded case

Applications

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

CASE STYLE: M22

Connectors	Model	Price	Qty.
BNC	ZDC-20-3	\$44.95 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 LOSS¹ (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.	L
0.2-250	19.5±0.5	±0.5	0.35	0.6	0.25	0.5	0.35	0.6	36	30	33	25	25	20	1.2	1.5	4.0

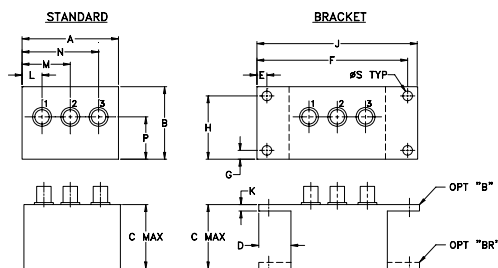
L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]

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

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
0.20	0.32	19.34	50.22	21.46	21.09	20.80
0.60	0.28	19.37	49.85	28.15	26.69	26.38
1.00	0.25	19.33	50.58	30.85	28.75	28.35
28.00	0.19	19.29	47.42	38.60	33.01	28.36
64.00	0.21	19.31	43.53	33.07	30.00	22.73
110.00	0.22	19.40	38.54	28.85	26.79	18.52
160.00	0.21	19.42	34.38	25.72	24.09	15.58
205.00	0.31	19.64	31.27	23.51	22.14	13.69
230.00	0.17	19.51	29.52	22.48	21.25	12.86
250.00	0.32	19.82	28.26	21.75	20.60	12.29

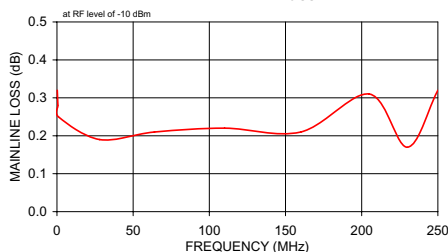
Outline Drawing



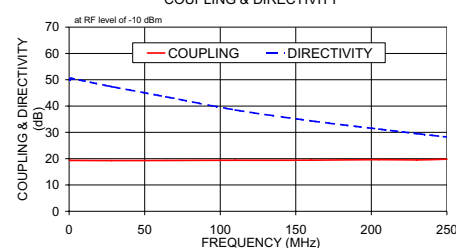
Outline Dimensions (inch)

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

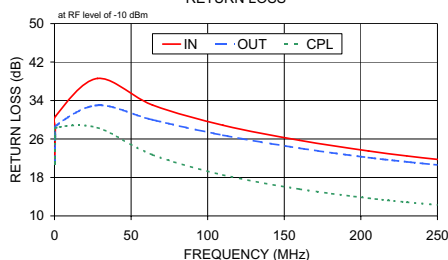
ZDC-20-3
MAINLINE LOSS



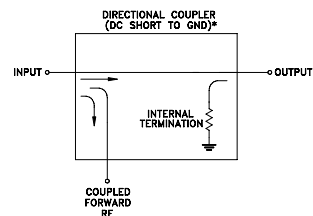
ZDC-20-3
COUPLING & DIRECTIVITY



ZDC-20-3
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.
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