

Coaxial Directional Coupler

75Ω

10 to 250 MHz

ZFDC-20-3-75+
ZFDC-20-3-75



CASE STYLE: K18

Connectors	Model	Price	Qty.
BNC	ZFDC-20-3-75(+)	\$49.95 ea.	(1-9)
BRACKET (OPTION "B")		\$2.50	(1+)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED	3

Features

- excellent directivity, 35 dB typ.
- excellent mainline loss, 0.3 dB typ.
- rugged shielded case

Applications

- catv
- VHF/UHF
- instrumentation
- amateur radio

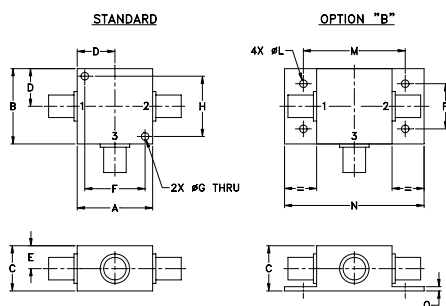
Directional Coupler Electrical Specifications

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.				
10-250	19.3±0.5	±0.3	0.25	0.4	0.3	0.5	0.4	0.6	29	25	29	25	28	24	1.2	1.0	2.0	

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



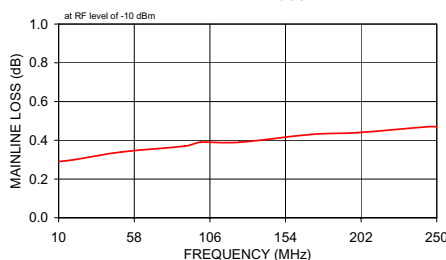
Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.00	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40
J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.75	.07	grams
--	--	3.18	42.88	55.37	19.05	1.78	70.0

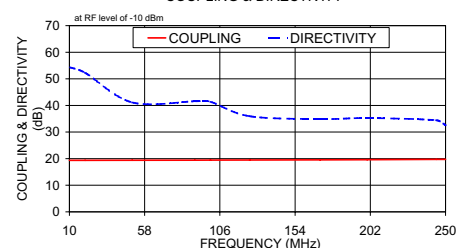
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		Cpl
				In	Out	
10.00	0.29	19.36	54.40	33.81	29.81	30.17
20.00	0.30	19.36	52.31	33.26	29.61	28.99
50.00	0.34	19.41	41.16	29.77	27.51	23.16
90.00	0.37	19.44	41.57	26.71	25.32	18.69
100.00	0.39	19.46	41.41	26.15	24.89	17.85
125.00	0.39	19.49	35.96	24.78	23.76	16.01
170.00	0.43	19.56	34.87	23.12	22.40	13.64
200.00	0.44	19.62	35.28	22.09	21.57	12.33
244.00	0.47	19.73	34.47	20.73	20.21	10.76
250.00	0.47	19.72	32.56	20.58	20.04	10.55

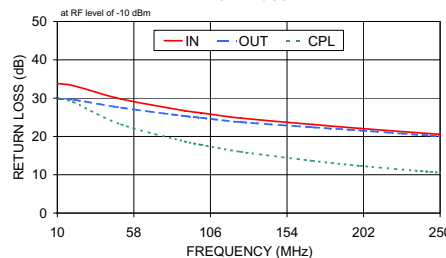
ZFDC-20-3-75
MAINLINE LOSS



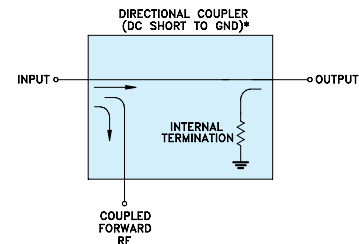
ZFDC-20-3-75
COUPLING & DIRECTIVITY



ZFDC-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.

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IF/RF MICROWAVE COMPONENTS

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