

Coaxial Directional Coupler

75Ω

10 to 250 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	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

ZFDC-20-3-75+



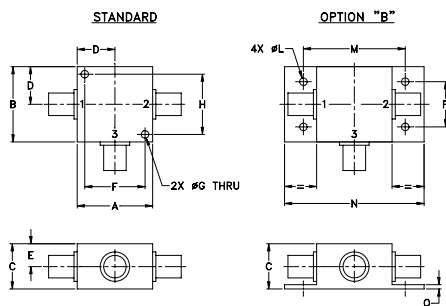
CASE STYLE: K18

Connectors	Model	Price	Qty.
BNC	ZFDC-20-3-75+	\$49.95 ea.	(1-9)
BRACKET (OPTION "B")		\$5.00	(1+)

+RoHS Compliant

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

Outline Drawing



Outline Dimensions (inch)

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

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
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

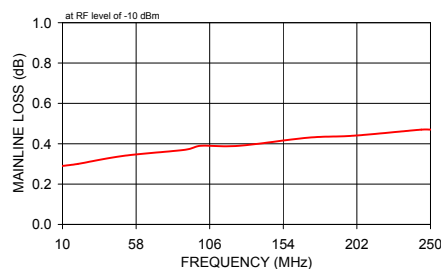
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U = upper range [f_U/2 to f_U]

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

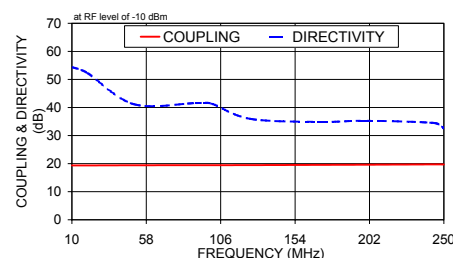
Typical Performance Data

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

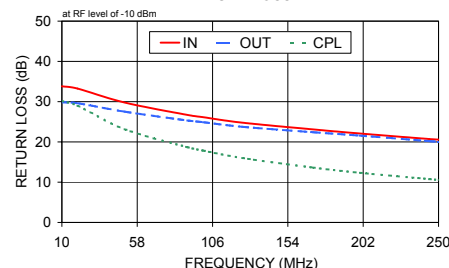
ZFDC-20-3-75+
MAINLINE LOSS



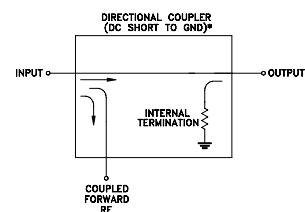
ZFDC-20-3-75+
COUPLING & DIRECTIVITY



ZFDC-20-3-75+
RETURN LOSS



Electrical Schematic



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

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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