

# Coaxial Directional Coupler

50Ω

1 to 500 MHz

ZFDC-10-1+  
ZFDC-10-1



BNC version shown  
CASE STYLE: K18

## 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, 33 dB typ.
- excellent mainline loss, 0.8 dB typ.
- rugged shielded case

## Applications

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

Connectors	Model	Price	Qty.
BNC	ZFDC-10-1(+)	\$44.95	(1-9)
SMA	ZFDC-10-1-S+	\$49.95	(1-9)
N-TYPE	ZFDC-10-1-N+	\$49.95	(1-9)
BRACKET (OPTION "B")		\$2.50	(1+)

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

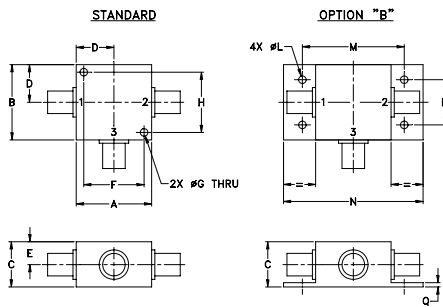
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

## Directional Coupler Electrical Specifications

FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (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.				
1-500	10.5±0.25	±0.6	1.0	1.3	0.8	1.1	1.0	1.3	32	25	33	25	22	15	1.2	1.5	3.0	

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)

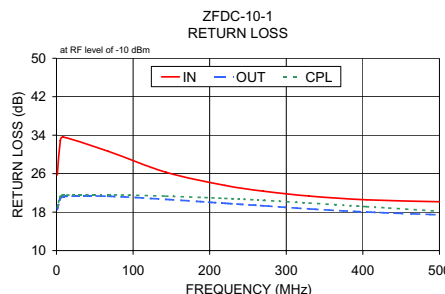
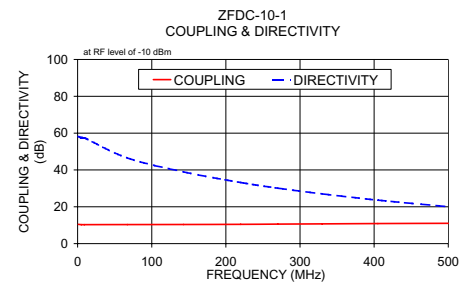
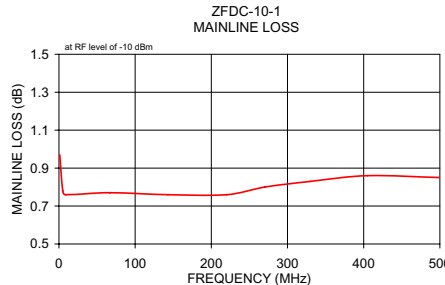
A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.00	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40

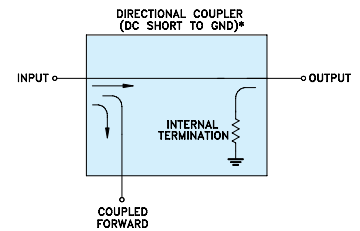
J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.75	.07	grams
--	--	3.18	42.88	55.37	19.05	1.78	70.0

## Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)		Return Loss (dB)		Cpl
			In	Out	In	Out	
1.00	0.97	10.47	58.25	25.76	18.55	19.10	
5.00	0.78	10.32	57.52	32.88	20.94	21.28	
9.00	0.76	10.31	57.51	33.62	21.25	21.54	
67.00	0.77	10.34	46.55	30.69	21.30	21.61	
143.00	0.76	10.40	38.96	26.28	20.66	21.32	
220.00	0.76	10.49	33.22	23.55	19.85	20.86	
270.00	0.80	10.62	30.12	22.35	19.32	20.45	
330.00	0.83	10.74	27.02	21.34	18.68	19.89	
405.00	0.86	10.90	23.63	20.56	18.03	19.15	
500.00	0.85	11.04	20.05	20.16	17.44	18.20	



## 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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