

# Coaxial Directional Coupler

## ZFDC-10-21

50Ω

1 to 1000 MHz



BNC version shown

CASE STYLE: K18

### 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

- wideband, 1 to 1000 MHz
- excellent directivity, 25 dB typ.
- rugged shielded case

### Applications

- VHF/UHF
- cellular
- instrumentation
- communications receivers & transmitters

Connectors	Model	Price	Qty.
BNC	ZFDC-10-21	\$54.95	(1-9)
SMA	ZFDC-10-21-S	\$59.95	(1-9)
N-TYPE	ZFDC-10-21-N	\$59.95	(1-9)
BRACKET (OPTION "B")		\$2.50	(1+)

### Directional Coupler Electrical Specifications

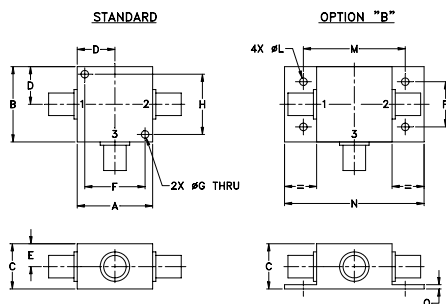
FREQ. RANGE (MHz)	COUPLING* (dB)		MAINLINE LOSS <sup>1</sup> (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)		
	Nom.	Flatness	L		M		U		L		M		U			Typ.	L	MU
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
1-1000	11±0.5	±0.5	1.2	2.1	1.2	1.7	1.6	2.0	40	30	25	20	25	20	1.2	1.0	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.

\* Upper range coupling flatness ±0.75 dB

### 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

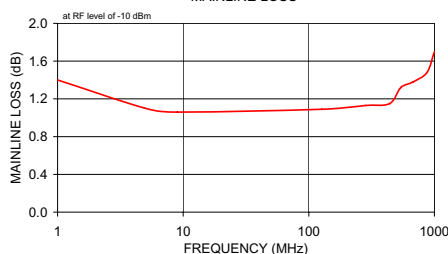
  

J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.75	.07	grams
--	--	3.18	42.88	55.37	19.05	1.78	70.0

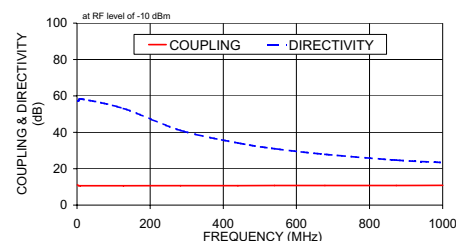
### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		Cpl
				In	Out	
1.00	1.40	11.11	57.10	19.66	15.47	14.40
5.00	1.10	10.69	57.53	29.35	18.65	17.89
9.00	1.06	10.64	58.41	33.22	19.11	18.54
127.00	1.09	10.63	53.14	35.93	19.06	18.61
283.00	1.13	10.67	41.08	33.11	18.61	17.79
440.00	1.15	10.67	34.18	32.39	17.97	16.96
540.00	1.32	10.77	31.02	32.13	17.66	16.67
678.00	1.38	10.77	27.90	29.33	17.37	16.50
873.00	1.48	10.76	24.75	23.76	17.46	17.00
1000.00	1.70	10.84	23.41	20.67	17.70	17.66

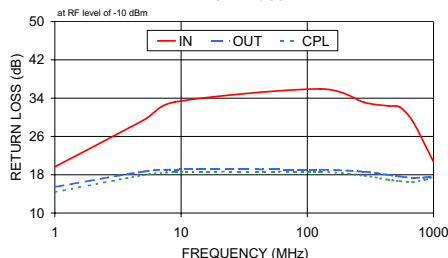
ZFDC-10-21 MAINLINE LOSS



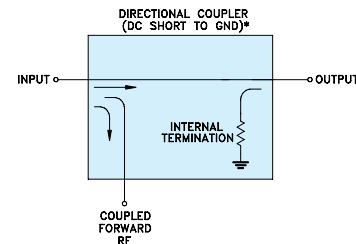
ZFDC-10-21 COUPLING & DIRECTIVITY



ZFDC-10-21 RETURN LOSS



### Electrical Schematic



\* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) THAT ROUTES DC FROM RF PORTS TO GROUND.

For detailed performance specs & shipping online see web site

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