

Coaxial Directional Coupler

50Ω

1 to 750 MHz

ZFDC-10-22



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

- excellent directivity, 25 dB typ.
- excellent VSWR, 1.25:1 typ.
- rugged shielded case

Applications

- VHF/UHF
- instrumentation
- communications receivers & transmitters

Connectors	Model	Price	Qty.
BNC	ZFDC-10-22	\$49.95	(1-9)
SMA	ZFDC-10-22-S	\$54.95	(1-9)
N-TYPE	ZFDC-10-22-N	\$54.95	(1-9)
BRACKET (OPTION "B")		\$5.00	(1+)

Directional Coupler Electrical Specifications

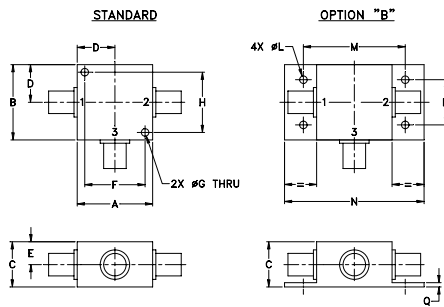
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)	
			L		M		U		L		M		U				
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	L
1-750	11±0.5	±0.5	1.1	1.9	1.2	1.7	1.4	1.9	35	30	25	20	25	20	1.25	1.0	2.0

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	Out	Cpl
5.00	1.17	10.76	56.00	26.72	17.45	17.54
10.00	1.13	10.72	55.00	31.54	18.12	18.32
20.00	1.21	10.74	54.00	34.28	18.19	18.42
50.00	1.26	10.79	52.00	30.97	17.69	17.87
100.00	1.20	10.85	45.27	29.52	17.58	17.66
200.00	1.24	10.84	36.71	29.28	17.84	17.74
366.22	1.34	10.87	31.90	29.98	19.03	18.34
500.00	1.22	10.90	30.51	29.97	20.33	18.48
727.43	1.28	10.96	30.19	27.90	23.20	16.88
750.00	1.27	10.94	29.66	27.62	23.46	16.58

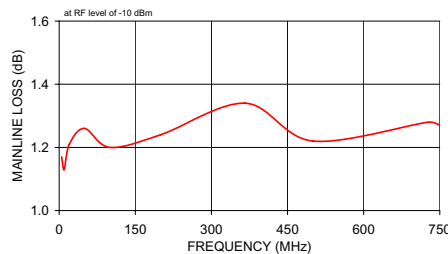
Outline Drawing



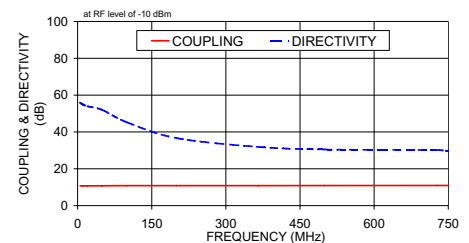
Outline Dimensions (inch/mm)

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

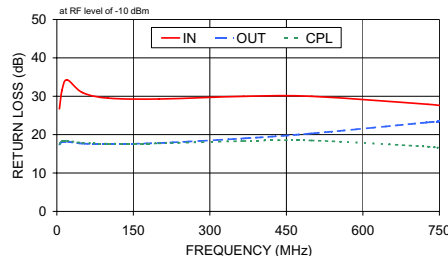
ZFDC-10-22
MAINLINE LOSS



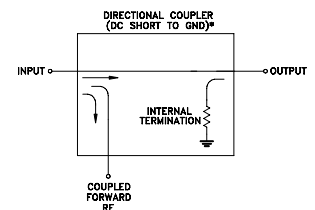
ZFDC-10-22
COUPLING & DIRECTIVITY



ZFDC-10-22
RETURN LOSS



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMERS 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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