Coaxial

Directional Coupler

ZFDC-10-21

50Ω 1 to 1000 MHz

BNC version shown

CASE STYLE: K18

Connectors	Model
BNC	ZFDC-10-21
SMA	ZFDC-10-21-S
N-TYPE	ZFDC-10-21-N
BRACKET (OPTION"B")	

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

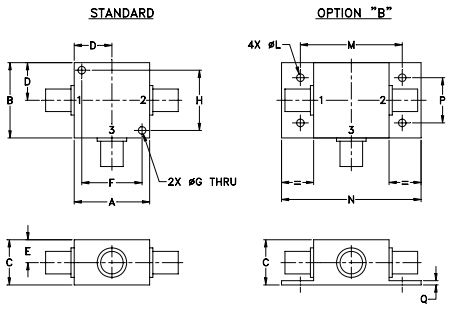
Features

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

Applications

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

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

Directional Coupler Electrical Specifications

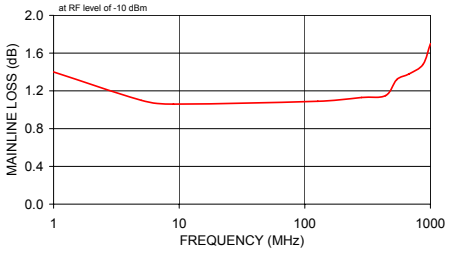
FREQ. RANGE (MHz)	COUPLING* (dB)		MAINLINE LOSS[1] (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)	
			L		M		U		L		M		U			L	MU
f_L-f_U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
1-1000	11±0.5	±0.5	1.2	2.1	1.2	1.7	1.6	2.0	40	30	25	20	25	20	1.2	1.0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

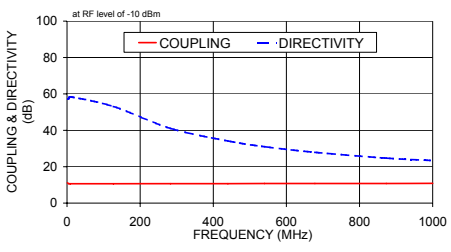
Typical Performance Data

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

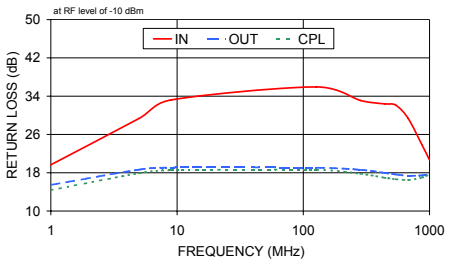
ZFDC-10-21
MAINLINE LOSS



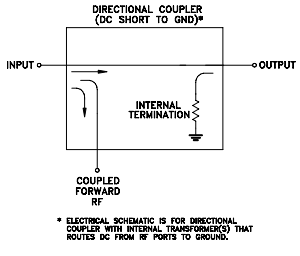
ZFDC-10-21
COUPLING & DIRECTIVITY



ZFDC-10-21
RETURN LOSS



Electrical Schematic



Notes
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