

Coaxial Directional Coupler

50Ω

20 to 2000 MHz

ZFDC-20-50



Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

Coaxial Connections

INPUT	3
OUTPUT	1
COUPLED	2

Features

- very wideband, 20 to 2000 MHz
- excellent directivity, 25 dB typ.
- excellent insertion loss, 0.7 dB typ.
- rugged shielded case

Applications

- cellular
- GPS
- instrumentation
- communication receivers & transmitters

CASE STYLE: K18

Connectors	Model	Price	Qty.
SMA	ZFDC-20-50-S	\$64.95	(1-9)
BRACKET (OPTION "B")		\$2.50	(1+)

Directional Coupler Electrical Specifications

FREQ. RANGE (MHZ)	COUPLING* (dB)		MAINLINE LOSS¹						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
20-2000	19.5±0.5	±0.8	0.8	1.3	0.7	1.3	1.0	1.6	30	20	25	20	22	10	1.25	1.0	1.0

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.

* Above 1000 MHz, coupling flatness ±1 dB

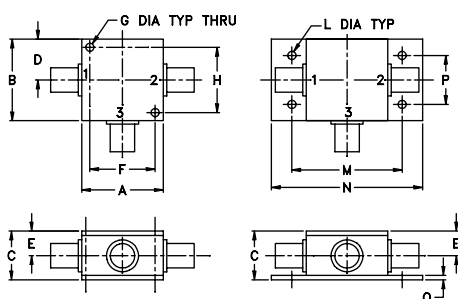
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB) In	Return Loss (dB) Out	Cpl
20.00	0.82	19.36	29.25	17.95	19.33	21.82
50.00	0.65	19.21	33.94	21.29	23.63	24.42
80.00	0.65	19.19	34.88	22.44	25.39	25.30
100.00	0.60	19.14	35.01	22.93	26.11	25.66
300.00	0.66	19.18	31.17	25.70	28.22	28.13
1000.00	0.86	19.37	23.02	24.12	32.91	28.50
1200.00	1.00	19.40	22.32	20.46	32.70	24.27
1400.00	1.09	19.40	21.99	17.71	30.28	21.55
1600.00	1.27	19.35	21.75	15.67	27.28	19.50
1800.00	1.34	19.36	21.00	14.04	24.37	17.79
2000.00	1.46	19.37	19.19	12.70	21.84	16.24

Outline Drawing

STANDARD

OPTION "B"

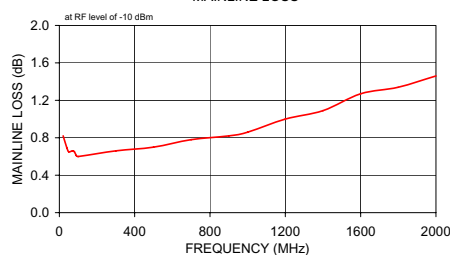


Outline Dimensions (inch/mm)

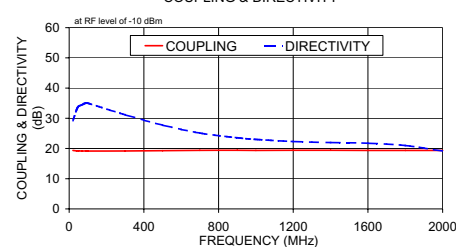
A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.00	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40

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

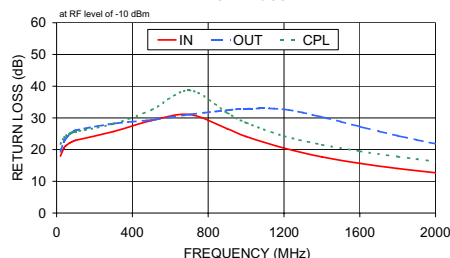
ZFDC-20-50
MAINLINE LOSS



ZFDC-20-50
COUPLING & DIRECTIVITY



ZFDC-20-50
RETURN LOSS



electrical schematic

