

Directional Coupler

50Ω

10 to 1000 MHz

ZFDC-20-4L



CASE STYLE: K18

Connectors Model
SMA ZFDC-20-4L
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

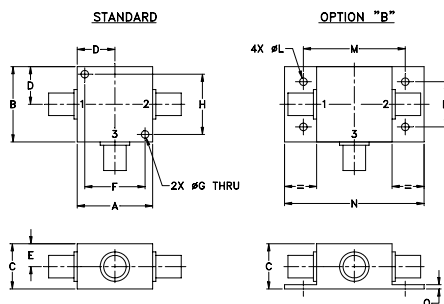
Features

- wideband, 10 to 1000 MHz
- excellent directivity, 30 dB typ.
- excellent mainline loss, 0.3 dB typ.
- excellent VSWR, 1.1:1 typ.
- rugged shielded case

Applications

- VSWR measurement
- power monitoring
- power leveling

Outline Drawing



Outline Dimensions (inch)

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

Electrical Specifications

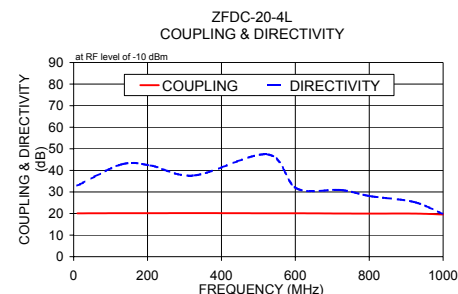
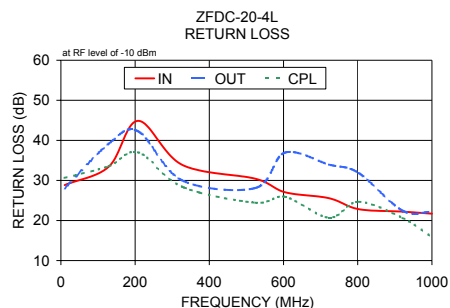
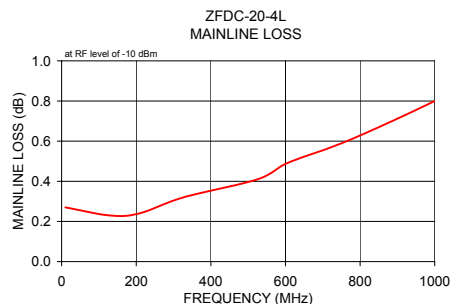
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)	
			L		M		U		L		M		U				
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
10-1000	20.2±0.5	±0.5	0.2	0.5	0.3	0.7	0.7	1.2	40	20	30	16	20	14	1.1	1.0	1.0

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]

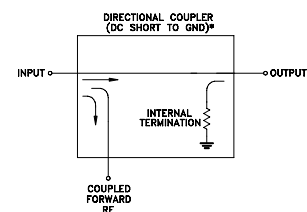
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB) In Out	Cpl
10.00	0.27	20.09	32.95	28.83 28.03	30.63
128.80	0.23	20.16	42.77	33.41 39.14	33.55
208.00	0.24	20.16	42.27	44.88 42.27	37.03
326.80	0.32	20.21	37.67	33.89 30.03	28.43
524.80	0.41	20.12	47.40	30.41 28.13	24.44
604.00	0.49	20.13	31.59	27.05 36.95	25.93
722.80	0.57	20.01	30.93	25.57 33.97	20.69
802.00	0.63	19.96	28.10	22.83 31.91	24.67
920.80	0.73	19.96	25.36	22.22 22.46	20.64
1000.00	0.80	19.57	19.77	21.71 22.17	15.92



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMERS THAT ROUTES DC FROM RF PORTS TO GROUND.

Notes

- A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

