

Coaxial Directional Coupler

50Ω

0.2 to 250 MHz

ZMDC-20-3



CASE STYLE: M21

Maximum Ratings

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

Coaxial Connections

INPUT	3
OUTPUT	2
COUPLED	1

Features

- excellent insertion loss, 0.35 dB typ.
- excellent directivity, 33 dB typ.
- high input power, up to 4W max.
- rugged shielded case

Applications

- HF/VHF
- amateur radio
- instrumentation

Connectors	Model	Price	Qty.
SMA	ZMDC-20-3	\$49.95	(1-9)
BRACKET (OPTION "B")		\$5.00	(1+)
BRACKET (OPTION "BR")		\$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 _c -f ₀	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
0.2-250	19.5±0.5	±0.5	0.35	0.6	0.35	0.5	0.35	0.6	36	30	33	25	25	20	1.2	1.5	4.0

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]

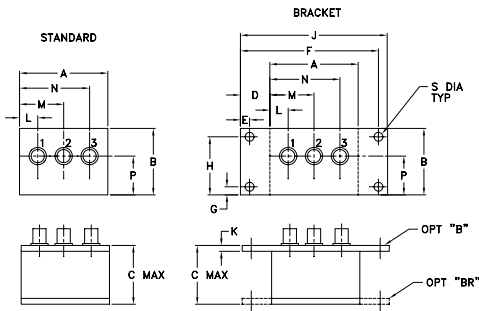
1. Mainline loss includes theoretical power loss at coupled port.

*Insertion loss specification in L range may degrade up to 1 dB at cold temperature (-55°C)

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
0.20	0.27	19.30	50.00	21.66	21.23	20.44
0.30	0.28	19.34	49.89	21.42	21.34	20.83
0.92	0.28	19.36	49.51	28.84	28.04	28.38
49.93	0.24	19.33	51.88	36.50	34.32	37.55
101.43	0.29	19.39	45.73	31.41	30.95	34.11
125.15	0.30	19.40	42.05	29.83	29.57	32.57
162.29	0.30	19.42	38.02	27.88	27.75	30.24
216.29	0.33	19.46	35.65	25.38	25.70	27.77
243.13	0.34	19.49	33.18	24.43	24.88	26.47
250.00	0.35	19.50	33.42	24.21	24.67	26.09

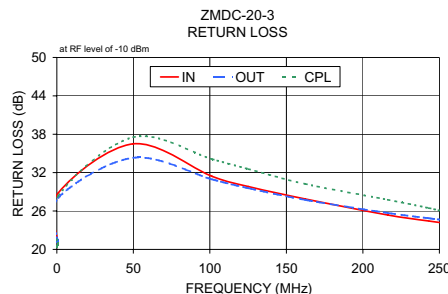
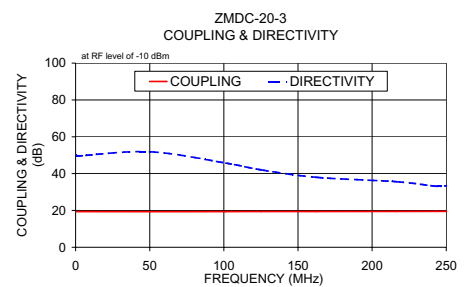
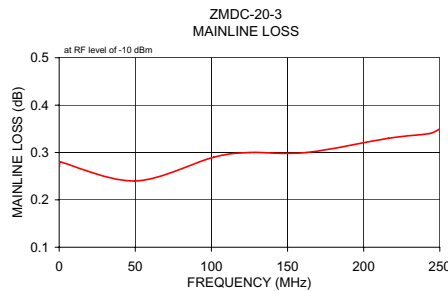
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.50	1.13	1.00	.50	.155	2.345	.138	.987
38.10	28.70	25.40	12.70	3.94	59.56	3.51	25.07

J	K	L	M	N	P	S	wt
2.50	.10	.31	.75	1.19	.66	.150	grams
63.50	2.54	7.87	19.05	30.23	16.76	3.81	40.0



electrical schematic

