

Coaxial Directional Coupler

50Ω

0.1 to 250 MHz

ZMDC-30-1



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, 0.5 dB typ.
- rugged shielded case

Applications

- HF/VHF
- amateur radio
- instrumentation

Connectors	Model	Price	Qty.
SMA	ZMDC-30-1	\$51.95	(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 _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
0.1-250	30±0.5	±0.5	0.4	0.6	0.5	0.8	0.55	0.85	23	18	20	15	17	10	1.5	1.0	3.0

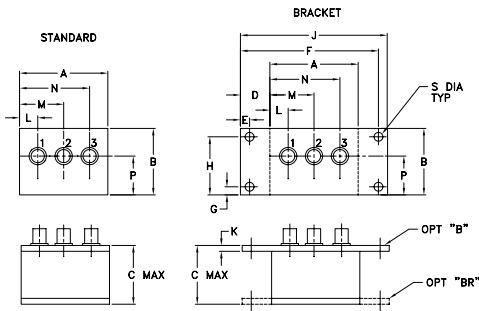
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U = upper range [f_U/2 to f_U]

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
0.10	0.33	30.77	40.14	14.97 14.57	22.19
0.50	0.25	30.66	40.18	28.11 24.39	22.07
0.90	0.24	30.68	40.64	31.51 26.80	22.06
24.00	0.20	30.67	37.39	37.30 29.40	21.95
52.00	0.22	30.68	35.22	31.72 28.95	21.94
89.00	0.24	30.72	33.59	27.65 27.78	21.97
132.00	0.27	30.80	30.45	24.51 26.44	22.01
169.00	0.29	30.87	29.99	22.53 24.92	22.09
214.00	0.32	30.97	28.18	20.61 23.40	22.22
250.00	0.35	31.09	28.60	19.35 22.21	22.35

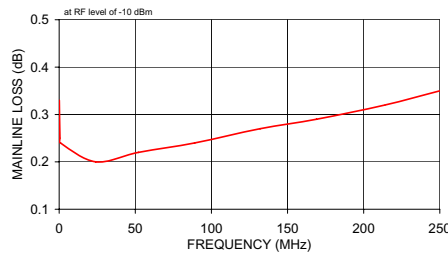
Outline Drawing



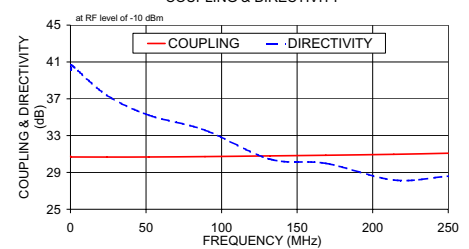
Outline Dimensions (inch/mm)

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

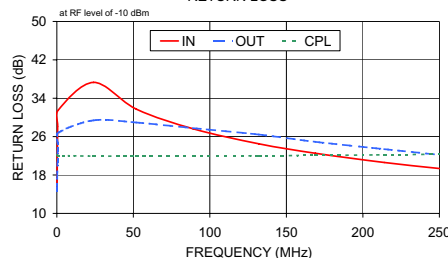
ZMDC-30-1
MAINLINE LOSS



ZMDC-30-1
COUPLING & DIRECTIVITY



ZMDC-30-1
RETURN LOSS



electrical schematic

