

Coaxial Directional Coupler

50Ω

0.2 to 250 MHz

ZMDC-20-3+
ZMDC-20-3



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 mainline 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

CASE STYLE: M21

Connectors	Model	Price	Qty.
SMA	ZMDC-20-3(+)	\$49.95	(1-9)
BRACKET (OPTION "B")		\$5.00	(1+)
BRACKET (OPTION "BR")		\$1.50	(1+)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Directional Coupler Electrical Specifications

FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)		
	Nom.	Flatness	L*		M		U		L		M		U			Typ.	L	MU
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
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]

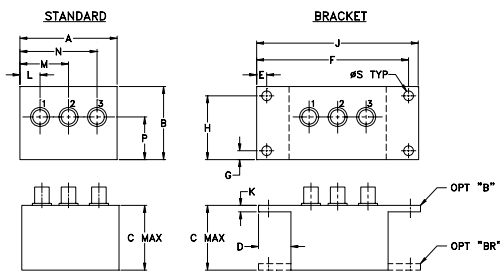
1. Mainline loss includes theoretical power loss at coupled port.

*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)		Cpl
			In	Out	In	Out	
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

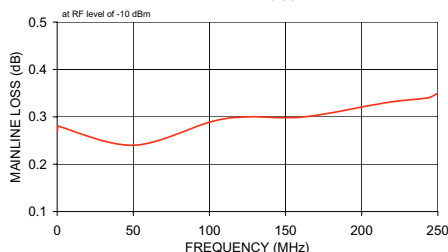


Outline Dimensions (inch/mm)

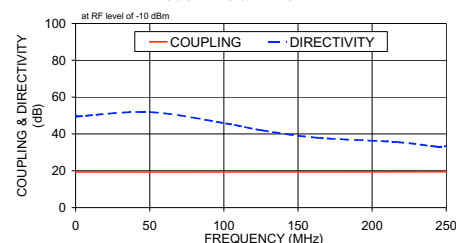
A	B	C	D	E	F	G	H
1.50	1.13	1.00	.50	.155	2.345	.138	.987
38.10	28.70	25.40	12.70	3.94	59.56	3.51	25.07

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

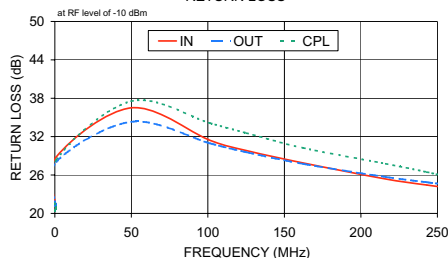
ZMDC-20-3 MAINLINE LOSS



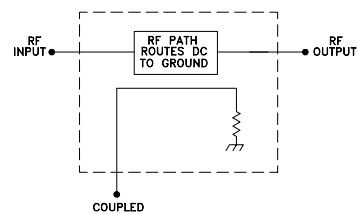
ZMDC-20-3 COUPLING & DIRECTIVITY



ZMDC-20-3 RETURN LOSS



electrical schematic



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RF/IF MICROWAVE COMPONENTS

REV. A
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