

Coaxial Directional Coupler

50Ω

0.2 to 250 MHz

ZMDC-20-3+



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	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 has been added in order to identify 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]

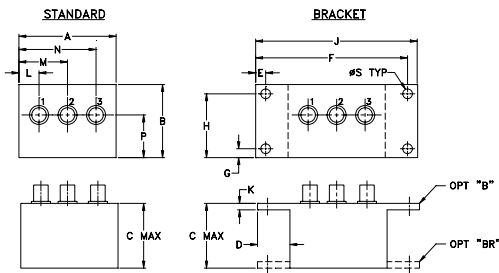
1. Mainline loss includes theoretical power loss at coupled port.

*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)		
				In	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

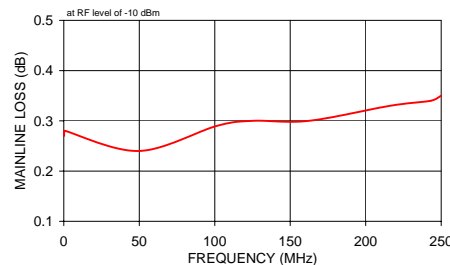


Outline Dimensions (inch/mm)

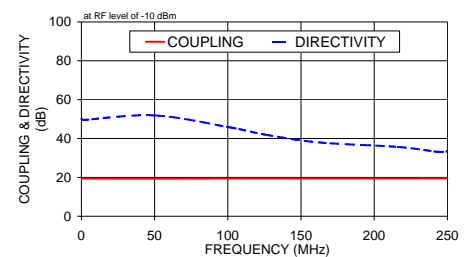
A	B	C	D	E	F	G	H
1.50	1.13	1.00	.50	.155	2.345	.138	.987
38.10	28.70	25.40	12.70	3.94	59.56	3.51	25.07

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

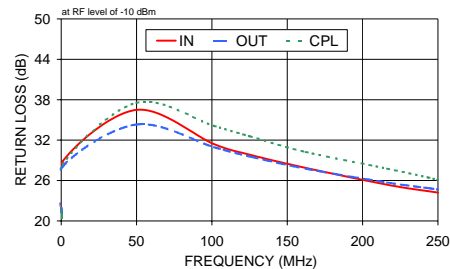
ZMDC-20-3+ MAINLINE LOSS



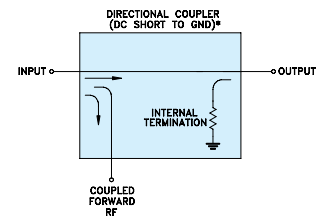
ZMDC-20-3+ COUPLING & DIRECTIVITY



ZMDC-20-3+ RETURN LOSS



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TERMINATION(S) THAT ROUTES DC FROM RF PORTS TO GROUND.

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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

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