

Coaxial Directional Coupler

50Ω

0.5 to 500 MHz

ZMDC-10-1+
ZMDC-10-1



CASE STYLE: M21

Connectors	Model	Price	Qty.
SMA	ZMDC-10-1(+)	\$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.

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, 0.65 dB typ.
- excellent directivity, 32 dB typ.
- rugged shielded case

Applications

- HF/VHF/UHF
- amateur radio
- instrumentation

Directional Coupler Electrical Specifications

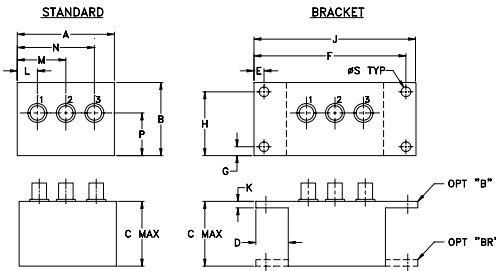
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)		
	Nom.	Flatness	L		M		U		L		M		U			Typ.	L	MU
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
f _L -f _U	11.5±0.5	±0.6	0.85	1.3	0.65	1.0	0.85	1.3	32	25	32	25	22	15	1.2	1.5	3.0	

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)		Cpl
			In	Out	In	Out	
0.50	0.73	11.62	75.22	63.60	25.33	20.56	
0.90	0.69	11.57	75.75	64.18	28.71	21.79	
4.00	0.58	11.45	74.20	62.75	34.21	24.05	
48.00	0.60	11.49	60.95	49.46	34.66	24.10	
124.00	0.63	11.55	52.70	41.15	31.03	23.50	
210.00	0.67	11.62	47.91	36.29	27.67	22.54	
260.00	0.70	11.66	45.71	34.05	26.27	21.97	
320.00	0.73	11.71	42.88	31.17	24.90	21.32	
420.00	0.81	11.80	38.25	26.46	23.14	20.45	
500.00	0.88	11.86	34.83	22.98	21.97	19.97	

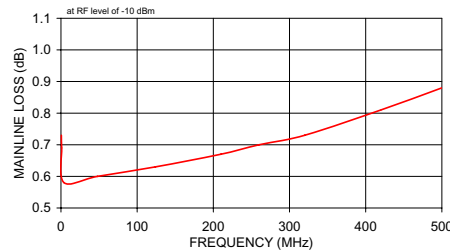
Outline Drawing



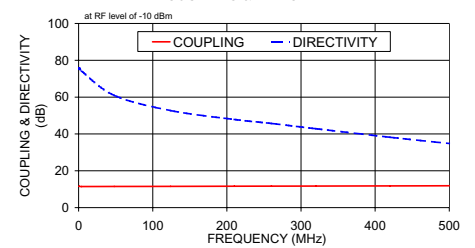
Outline Dimensions (inch/mm)

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

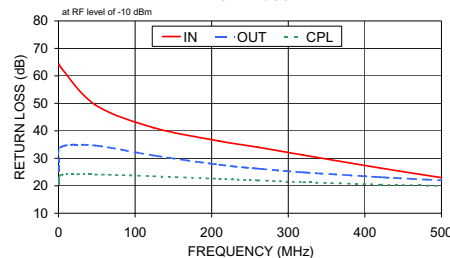
ZMDC-10-1
MAINLINE LOSS



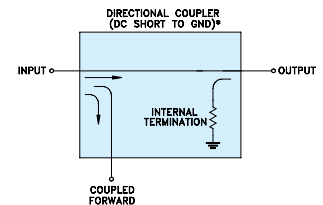
ZMDC-10-1
COUPLING & DIRECTIVITY



ZMDC-10-1
RETURN LOSS



Electrical Schematic



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

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