

Coaxial Directional Coupler

50Ω

0.5 to 500 MHz

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

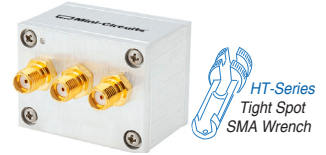
Features

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

Applications

- HF/VHF/UHF
- amateur radio
- instrumentation

ZMDC-10-1+



Generic photo used for illustration purposes only

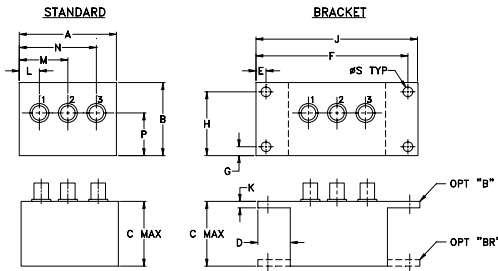
CASE STYLE: M21

Connectors	Model
SMA	ZMDC-10-1+
BRACKET (OPTION "B")	
BRACKET (OPTION "BR")	

+RoHS Compliant

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

Outline Drawing



Outline Dimensions (inch)

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

Directional Coupler Electrical Specifications

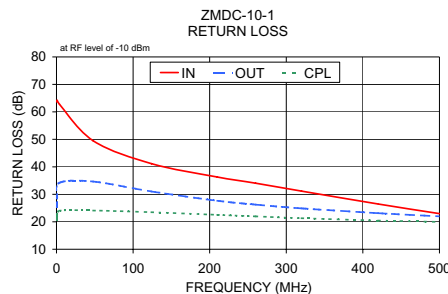
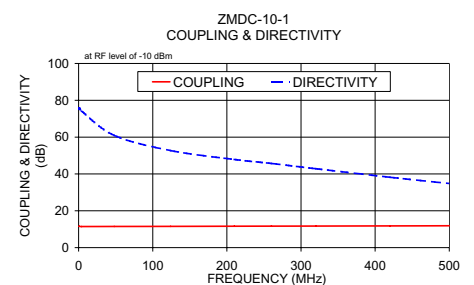
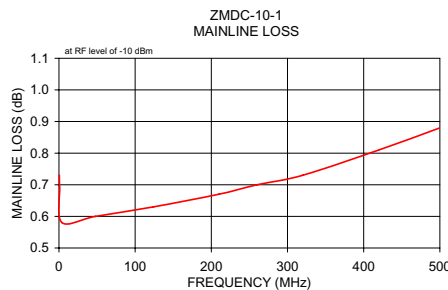
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)	
			L		M		U		L		M		U				
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
0.5-500	11.5±0.5	±0.6	0.85	1.3	0.65	1.0	0.85	1.3	32	25	32	25	22	15	1.2	1.5	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]

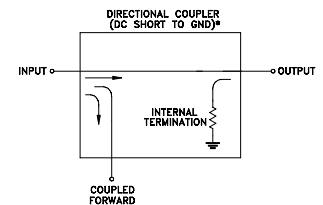
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
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



Electrical Schematic



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

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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