

Coaxial Directional Coupler

75Ω

1 to 250 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 directivity, 30 dB typ.
- rugged shielded case

Applications

- VHF/HF
- instrumentation
- communication receivers & transmitters
- amateur radio

ZDC-10-1-75+



CASE STYLE: M22

Connectors Model

BNC ZDC-10-1-75+

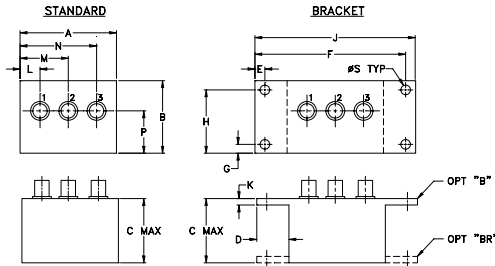
BRACKET (OPTION "B")

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 mm)

A	B	C	D	E	F	G	H
2.25	1.38	1.24	.50	.150	3.100	.138	1.238
57.15	35.05	31.50	12.70	3.81	78.74	3.51	31.45
J	K	L	M	N	P	S	wt
3.25	.10	.40	1.15	1.86	.64	.150	grams
82.55	2.54	10.16	29.21	47.24	16.26	3.81	74.0

Directional Coupler Electrical Specifications

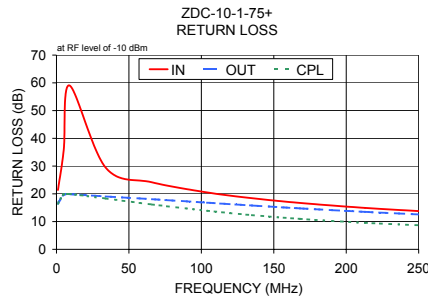
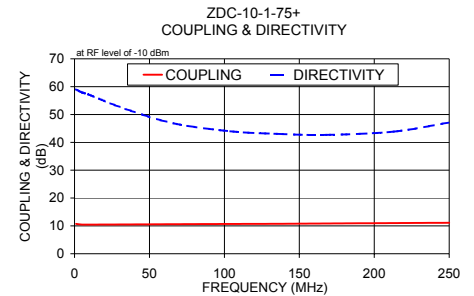
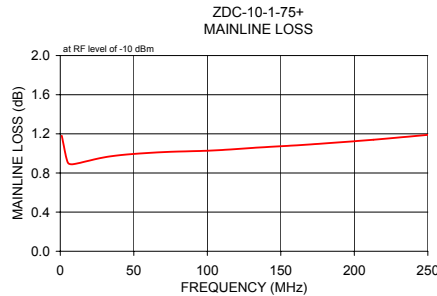
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)	
			L		M		U		L		M		U				
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
1-250	10.5±0.5	±0.75	1.1	1.5	1.1	1.5	1.1	1.5	30	20	30	20	30	20	2.0	2.0	4.0

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]

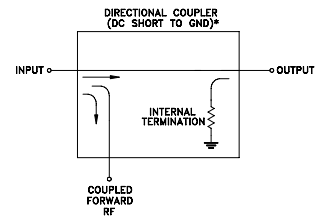
1. Mainline loss includes theoretical power loss at coupled port. Below 5 MHz Insertion loss increases to 2.0 dB @ -55°C.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
1.00	1.18	10.73	59.03	21.38	16.52	16.51
5.00	0.91	10.47	57.90	35.71	19.69	19.82
9.00	0.89	10.46	57.24	59.04	19.88	19.96
34.00	0.97	10.53	52.00	29.42	19.04	18.32
66.00	1.01	10.60	46.85	24.14	18.06	16.17
104.00	1.03	10.68	43.98	20.51	16.82	13.89
135.00	1.06	10.76	43.05	18.43	15.79	12.32
168.00	1.09	10.86	42.67	16.71	14.77	10.97
213.00	1.14	11.00	43.85	14.92	13.50	9.56
250.00	1.19	11.13	47.13	13.77	12.57	8.67



Electrical Schematic



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

Notes

- A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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