

Coaxial Directional Coupler

ZDC-10-1-75+

75Ω

1 to 250 MHz



Generic photo used for illustration purposes only

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

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

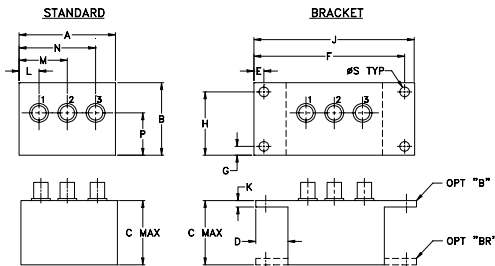
Directional Coupler Electrical Specifications

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.				
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.

Outline Drawing



Outline Dimensions (inch/mm)

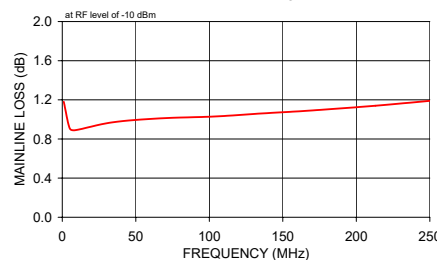
A	B	C	D	E	F	G	H
2.25	1.38	1.24	.50	.150	3.100	.138	1.238
57.15	35.05	31.50	12.70	3.81	78.74	3.51	31.45

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

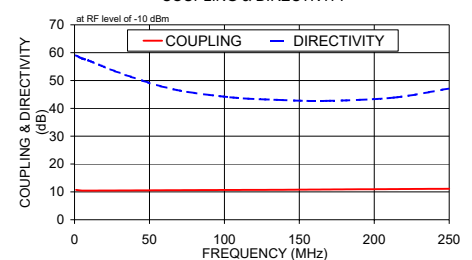
Typical Performance Data

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

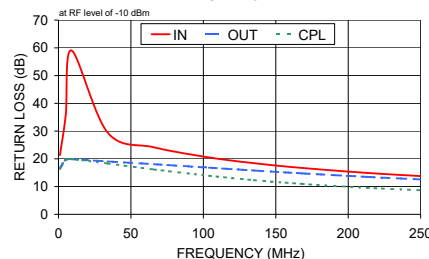
ZDC-10-1-75+ MAINLINE LOSS



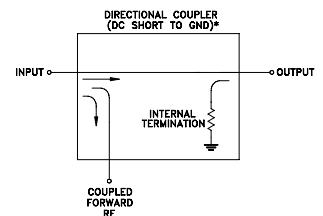
ZDC-10-1-75+ COUPLING & DIRECTIVITY



ZDC-10-1-75+ RETURN LOSS



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMERS 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp

