

Coaxial Directional Coupler

50Ω

0.5 to 500 MHz

ZDC-10-1+



CASE STYLE: M22

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

Applications

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

Connectors	Model	Price	Qty.
BNC	ZDC-10-1+	\$44.95 ea.	(1-9)
BRACKET (OPTION "B")		\$5.00	(1+)
BRACKET (OPTION "BR")		\$1.50	(1+)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

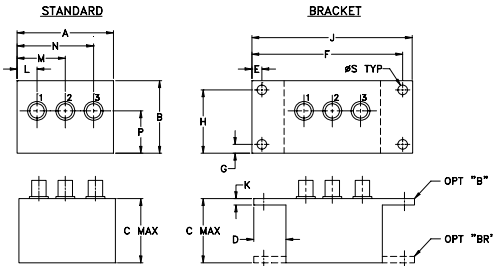
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

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			L	MU
f_L - f_U			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	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.

Outline Drawing



Outline Dimensions (inch/mm)

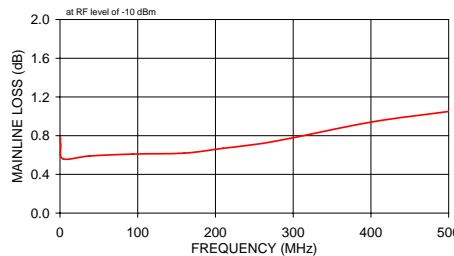
A	B	C	D	E	F	G	H
2.25	1.38	1.24	.50	.150	3.100	.138	1.238
57.15	35.05	31.50	12.70	3.81	78.74	3.51	31.45

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

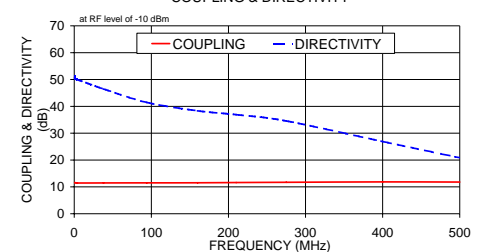
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		Cpl
				In	Out	
0.50	0.79	11.64	51.25	23.85	19.63	19.66
0.90	0.70	11.56	50.03	27.29	21.30	21.28
4.00	0.56	11.44	49.98	34.05	24.12	23.94
38.00	0.59	11.48	46.48	35.54	23.96	23.10
94.00	0.61	11.51	41.48	32.20	23.33	20.84
160.00	0.62	11.54	38.35	28.76	22.29	18.21
210.00	0.67	11.63	36.91	26.97	21.43	16.63
275.00	0.74	11.71	34.57	25.19	20.29	15.00
400.00	0.94	11.85	26.91	22.30	18.40	13.06
500.00	1.05	11.79	20.87	19.79	17.45	12.48

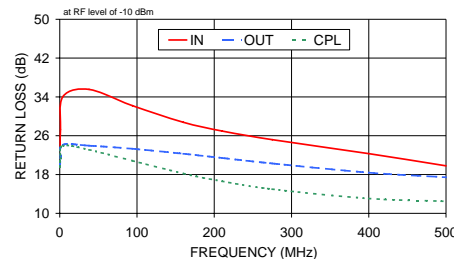
ZDC-10-1+ MAINLINE LOSS



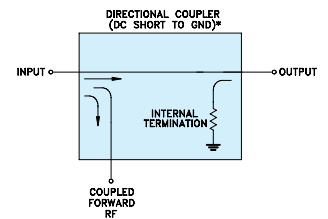
ZDC-10-1+ COUPLING & DIRECTIVITY



ZDC-10-1+ RETURN LOSS



Electrical Schematic



Mini-Circuits
 ISO 9001 ISO 14001 AS 9100 CERTIFIED
 P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine
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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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