

Coaxial Bi-Directional Coupler

ZX30-20-20BD+

50Ω, 20dB Coupling, 500 to 2000 MHz

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

INPUT	1
OUTPUT	4
COUPLED (forward)	2
COUPLED (reverse)	3

Features

- very broadband, multi octave
- low mainline loss, 0.2 dB typ.
- power handling, 2 watts
- low cost
- protected by US patent, 6,790,049

Applications

- UHF, GSM, ISM, GPS & PCN
- cellular



CASE STYLE: GW1052

Connectors	Model	Price	Qty.
SMA	ZX30-20-20BD-S+	\$31.95	(1-9)

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

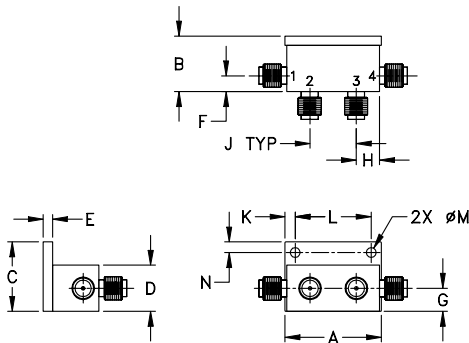
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Bi-Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT (W)
	Nom.	Typ. Flatness	Typ.	Max.	Typ.	Min.		
500-800	22.5±1.0	±0.5	0.2	0.4	21	16	1.2	2
800-1000	21.5±1.0	±0.4	0.15	0.35	21	16	1.2	2
1000-1500	20.5±1.0	±0.8	0.2	0.4	20	16	1.2	2
1700-2000	19.0±1.0	±0.4	0.25	0.5	20	14	1.2	2

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

Outline Drawing



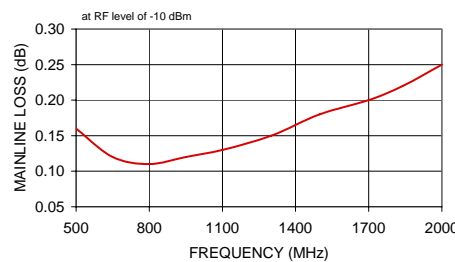
Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
1.04	.60	.75	.50	.10	.17	.25
26.42	15.24	19.05	12.70	2.54	4.32	6.35
H	J	K	L	M	N	wt.
.25	.50	.11	.820	.106	.12	grams
6.35	12.70	2.79	20.83	2.69	3.05	21.0

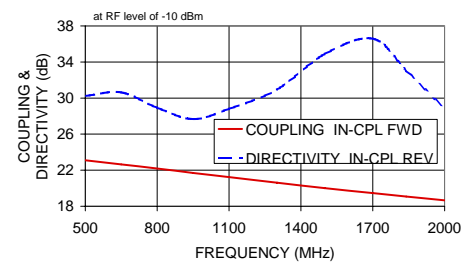
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB)		Directivity (dB)		Return Loss (dB)			
		In-Cpl Fwd	Out-Cpl Rev	Out-Cpl Fwd	In-Cpl Rev	In	Out	Cpl Fwd	Cpl Rev
500.00	0.16	23.10	23.06	20.43	30.23	17.89	17.83	16.81	16.72
650.00	0.12	22.64	22.58	20.14	30.64	21.76	21.12	19.56	19.50
800.00	0.11	22.18	22.12	19.89	28.94	24.79	24.56	21.83	21.91
950.00	0.12	21.70	21.60	19.86	27.68	26.57	26.33	23.96	24.12
1100.00	0.13	21.23	21.15	20.23	28.80	28.48	27.27	25.88	25.95
1300.00	0.15	20.61	20.50	20.96	30.94	27.89	27.83	28.13	27.68
1500.00	0.18	20.02	19.92	21.68	34.89	26.64	27.27	29.66	29.05
1700.00	0.20	19.46	19.36	22.08	36.59	25.04	25.34	29.41	29.26
1840.00	0.22	19.08	18.98	21.62	33.05	23.87	23.92	28.03	28.44
2000.00	0.25	18.66	18.54	20.89	28.80	22.33	21.94	26.51	27.04

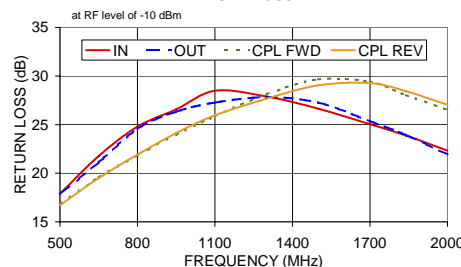
ZX30-20-20BD+ MAINLINE LOSS



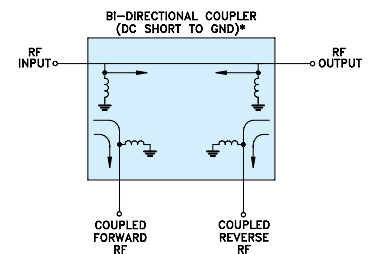
ZX30-20-20BD+ COUPLING & DIRECTIVITY



ZX30-20-20BD+ RETURN LOSS



Electrical Schematic



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

For detailed performance specs & shipping online see web site



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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.

REV. B
M124579
ED-12393A
ZX30-20-20BD+
WZ/LC/CP/AM
091016