

# Coaxial Directional Coupler

## ZX30-17-5+

50Ω 5 to 2000 MHz

### Maximum Ratings

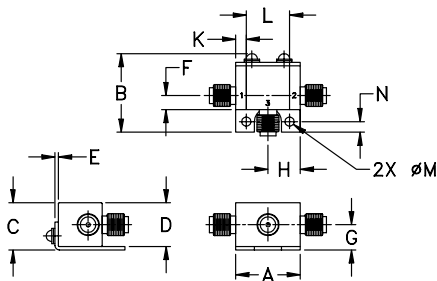
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

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

### Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED	3

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.74	.90	.54	.50	.04	.16	.29
18.80	22.86	13.72	12.70	1.02	4.06	7.37
H	J	K	L	M	N	wt
.37	--	.122	.496	.106	.122	grams
9.40	--	3.10	12.60	2.69	3.10	20.0

### Features

- very flat coupling
- very broad, multi-octave
- all welded construction
- protected by U.S. Patents 6,140,887 & 6,784,521 & 6,790,049

### Applications

- cable tv
- instrumentation
- communications receivers & transmitters
- GPS



CASE STYLE: FL905

Connectors	Model	Price	Qty.
SMA	ZX30-17-5-S+	\$29.95 ea.	(1-24)

+ 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.

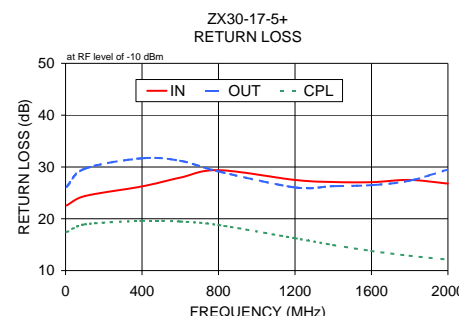
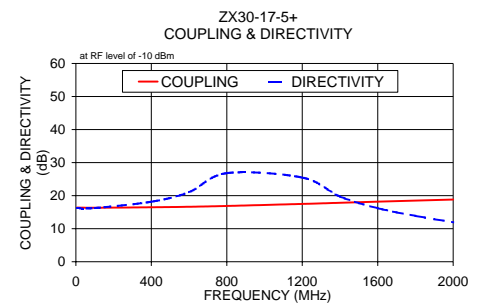
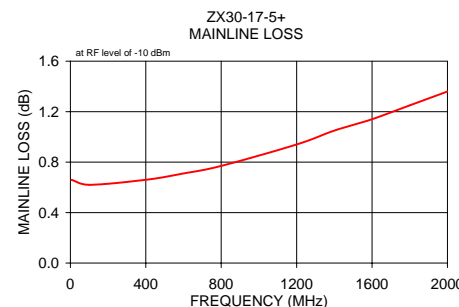
### Directional Coupler Electrical Specifications (T<sub>AMB</sub> = 25°C)

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT, W	
	Nom.	Typ. Flatness	Typ.	Max.	Typ.	Min.		Typ.	L
f <sub>L</sub> -f <sub>U</sub>									
5-1000	16.8±0.7	±0.4	0.7	1.1	16	14	1.30	0.5	1.0
1000-1500	17.5±0.9	±0.4	0.85	1.4	18	12	1.30	0.5	1.0
1500-2000	18.5±1.0	±0.3	1.1	1.7	14	-	1.30	0.5	1.0

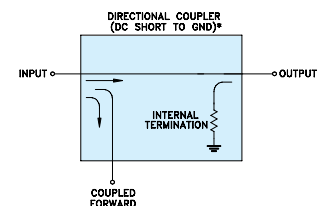
1. Mainline loss includes theoretical power loss at coupled port.

### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
5.00	0.66	16.40	16.11	22.56	26.16	17.43
100.00	0.62	16.33	16.24	24.38	29.66	18.91
400.00	0.66	16.48	18.15	26.25	31.68	19.58
600.00	0.71	16.64	21.05	27.95	31.19	19.46
800.00	0.77	16.87	26.80	29.39	29.15	18.78
1200.00	0.94	17.49	25.48	27.49	26.06	16.25
1400.00	1.05	17.83	19.73	27.10	26.30	14.93
1600.00	1.14	18.17	16.19	27.06	26.48	13.79
1800.00	1.25	18.51	13.87	27.50	27.35	12.86
2000.00	1.36	18.83	11.92	26.79	29.50	12.12



### Electrical Schematic



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

For detailed performance specs & shopping 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](http://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](http://www.minicircuits.com/MCLStore/terms.jsp).

REV. H  
M121747  
ED-10213A/3  
ZX30-17-5+  
WZ/TD/CP/AM  
090917