

Coaxial Directional Coupler

50Ω 5 to 1000 MHz

ZX30-20-4+ ZX30-20-4



CASE STYLE: FL905

Connectors	Model	Price	Qty.
SMA	ZX30-20-4-S(+)	\$29.95 ea.	(1-24)

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

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

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

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

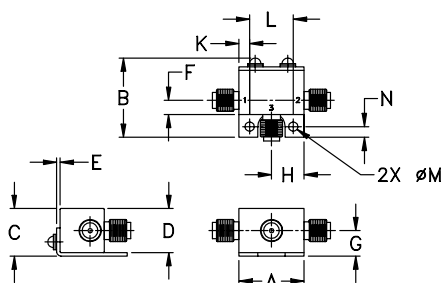
- VHF/UHF
- instrumentation
- communications receivers & transmitters
- cable tv

Directional Coupler Electrical Specifications (T_{AMB} = 25°C)

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W			
	Nom.	Typ. Flatness	L		M		U		L		M		U			Typ.	L	MU	
f _L -f _U			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
5-1000	20.5±0.6	±0.5	0.3	0.5	0.35	0.6	0.6	0.9	21	19	22	19	19	11	1.11	1.0	1.0		

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)

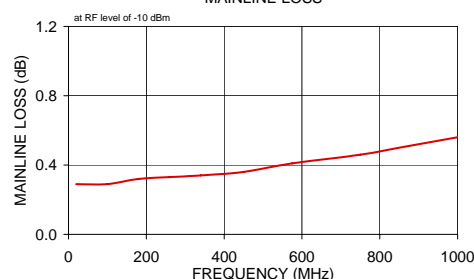
A	B	C	D	E	F	G
.74	.90	.54	.50	.04	.16	.29
18.80	22.86	13.72	12.70	1.02	4.06	7.37

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

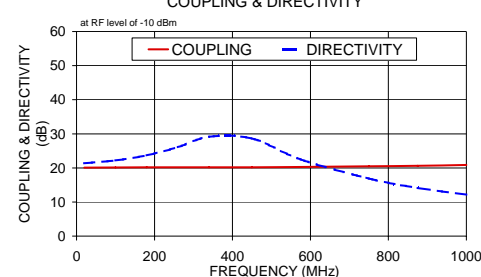
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
20.00	0.29	20.09	21.35	29.65	33.25	27.81
100.00	0.29	20.12	22.22	29.95	33.34	27.20
180.00	0.32	20.16	23.67	30.03	32.96	25.43
260.00	0.33	20.17	26.11	30.01	32.22	23.53
340.00	0.34	20.18	29.14	29.95	31.83	21.53
450.00	0.36	20.20	28.63	30.13	30.82	19.44
575.00	0.41	20.29	22.50	30.59	30.09	17.36
750.00	0.46	20.46	16.86	32.61	29.81	15.04
875.00	0.51	20.63	14.14	35.69	28.84	13.69
1000.00	0.56	20.85	12.18	41.42	27.44	12.56

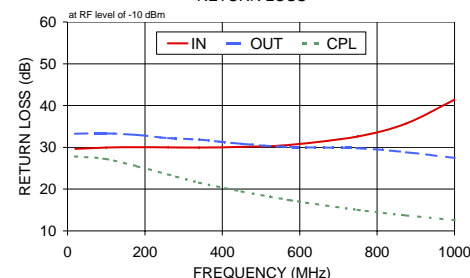
ZX30-20-4
MAINLINE LOSS



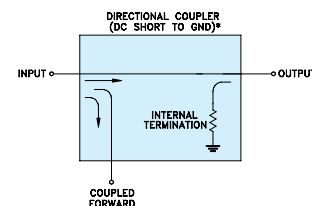
ZX30-20-4
COUPLING & DIRECTIVITY



ZX30-20-4
RETURN LOSS



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

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IF/RF MICROWAVE COMPONENTS

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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