

# Directional Coupler

Z30-10-4-75+

75Ω 5 to 1000 MHz



CASE STYLE: K18

Connectors Model  
BNC Z30-10-4-75+

**+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

\* Case temperature is defined as temperature on ground leads. 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

## Applications

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

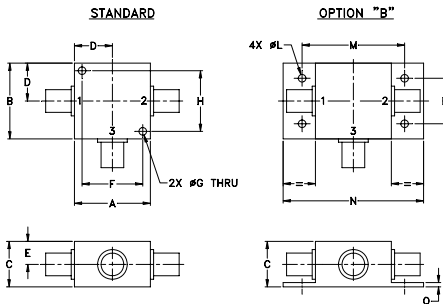
## Electrical Specifications (T<sub>AMB</sub> = -55°C to 100°C)

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W			
	Nom.	Typ. Flatness	L		M		U		L		M		U			Typ.	L	MU	
f <sub>L</sub> -f <sub>U</sub>			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
5-1000	10.5±0.5	±0.3	1.8	2.5	1.5	2.3	1.5	2.2	22	16	21	14	19	—	1.30	0.5	1.0		

L = low range [f<sub>L</sub> to 10 f<sub>L</sub>] M = mid range [10 f<sub>L</sub> to f<sub>U</sub>/2] U = upper range [f<sub>U</sub>/2 to f<sub>U</sub>]

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

## Outline Drawing

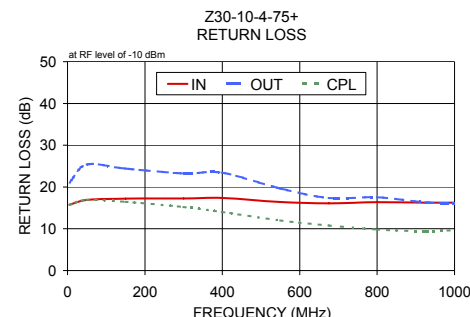
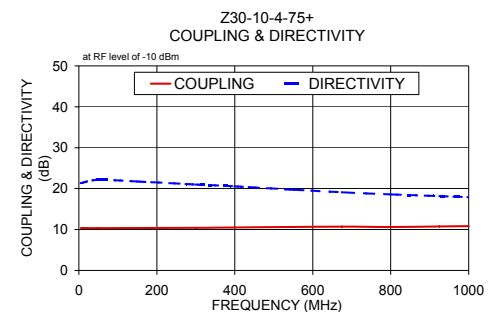
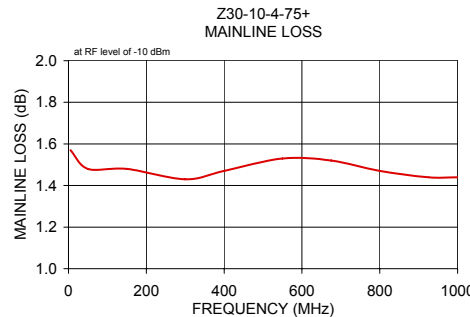


## Outline Dimensions (inch/mm)

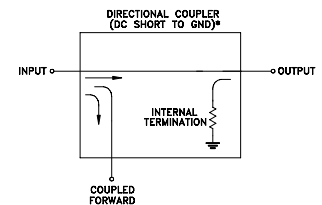
A	B	C	D	E	F	G	H		
1.25	1.25	.75	.63	.38	1.00	.125	1.000		
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40		
J	K	L	M	N	P	Q	wt		
--	--	.125	1.688	2.18	.75	.07	grams		
--	--	3.18	42.88	55.37	19.05	1.78	70.0		

## Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
5.00	1.57	10.37	21.34	15.75	21.08	15.73
50.00	1.48	10.32	22.14	16.91	25.37	16.93
150.00	1.48	10.37	21.74	17.20	24.41	16.47
300.00	1.43	10.43	21.02	17.24	23.24	15.21
400.00	1.47	10.51	20.55	17.36	23.43	14.01
550.00	1.53	10.64	19.74	16.41	19.62	11.98
675.00	1.52	10.70	19.10	16.07	17.37	10.77
800.00	1.47	10.64	18.60	16.36	17.53	9.81
925.00	1.44	10.74	18.18	16.26	16.35	9.42
1000.00	1.44	10.83	17.88	16.24	16.18	9.66



## Electrical Schematic



\* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER 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.
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