



Balun Specification PN:530920-00 rev1.0

Features

- 0°-180° Hybrid
- Seven Octave Frequency Range

Guaranteed Specifications*

(From -55°C to +85°C)

Frequency Range	30-3000 MHz	
Insertion Loss (Less coupling)	30-100 MHz	1.2 dB Max
	100-1500 MHz	1.5 dB Max
	1500-3000 MHz	2.5 dB Max
Isolation	30-100 MHz	25 dB Min
	100-1500 MHz	20 dB Min
	1500-3000 MHz	20 dB Min
Amplitude Balance	30-3000 MHz	0.4 dB Max
VSWR	30-100 MHz	1.6:1 Max
	100-1500 MHz	1.6:1 Max
	1500-3000 MHz	2.5:1 Max
Phase Unbalance	30-100 MHz	3° Max
	100-1500 MHz	7.5° Max
	1500-3000 MHz	15° Max

Operating Characteristics

Impedance 50 Ohms Nominal

Input Power 5 Watts Max

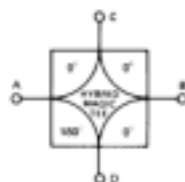
Environmental

MIL-STD-883 screening available.

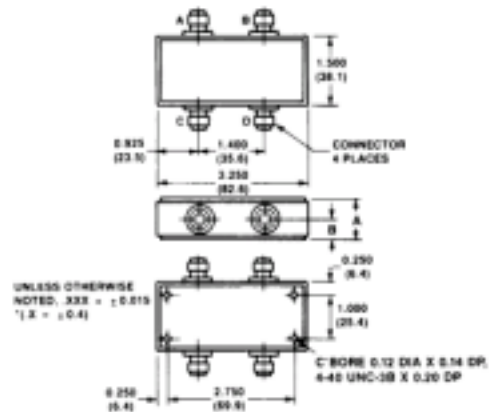
* All specifications apply with 50 ohm source and load impedance.

This product contains elements protected by United States Patent Number 3,598,171.

Functional Diagram



C-11



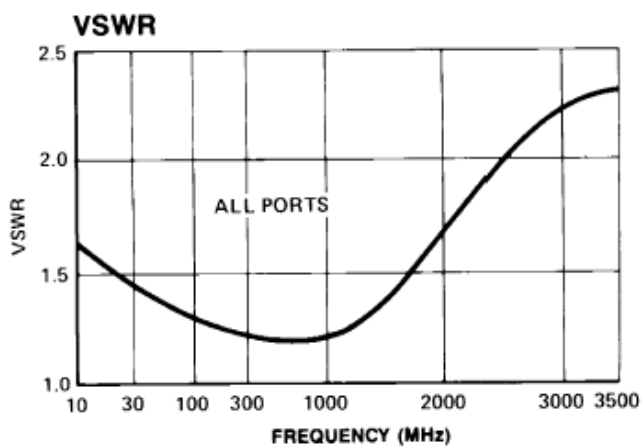
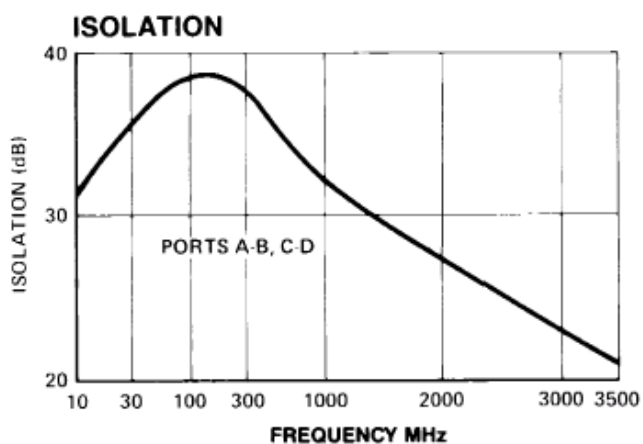
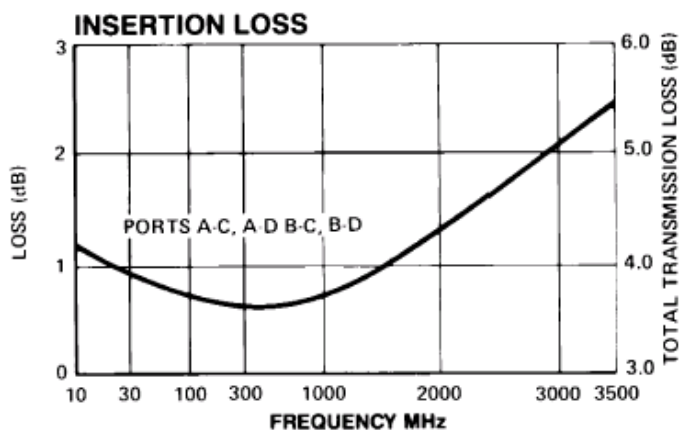
Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ±0.015 (.x = ±0.4)
WEIGHT (APPROX): 7 OUNCES 198 GRAMS

	A	B
H-163-4	1.207 ± 0.020 (30.6 ± 0.5)	0.592 ± 0.020 (15.03 ± 0.5)



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Typical Performance





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Instruction Sheet

Shown below is the table that is on the actual balun. The table explains how the port signal phases relate to one another. Note that port D is the port that is not labeled. It is located above on the balun.

Example 1:

A single ended output signal is to be derived from a differential input signal. The inputs will be ports 'C' and 'D'. 'C' will be the 'INPUT' and 'D' will be the 'INPUT NOT' port. The single ended output will be port 'A'. The table on the balun shows that port 'D' will shift the 'INPUT NOT' signal phase 180 degrees. Port 'C' shifts the signal 0 degrees. This results in two inphase signals which are combined and output as a single ended signal at port 'A'. The unused port 'B' should be terminated in 50 Ω (Termination Cap MaCom P/N: 2001-6500-00).

Example 2:

Differential output signals are needed from a single ended input signal.

Port 'A' will be the 'INPUT' port. The table on the balun indicates that the signal at port 'C' will be 0 degrees out of phase with the input signal. Port 'C' will be the 'OUTPUT' port. The table indicates that port 'D' will be 180 degrees out of phase with the input port. Port 'D' will be the "OUTPUT NOT" port. The unused port 'B' should be terminated in 50 Ω .