

## HL9313 Sampler / Harmonic Mixer

The HL9313 is a high-precision sampler / harmonic mixer offering better than -60 dBc linearity in the second and third harmonics up to 20 GHz (RF).

## Features and Technical Specifications

RF Bandwidth (typical, from reference signal)	15 GHz (-3 dB) 19 GHz (-6 dB)
LO Input Frequency, Sinusoidal	1 GHz to 2.5 GHz
LO Input Frequency, Square Wave	10 Hz to 2.5 GHz
Conversion Loss	-24 dB
LO to RF Isolation	67 dB
Linearity, Second Harmonic Distortion*	-68 dBc
Linearity, Third Harmonic Distortion*	-66 dBc
Noise Floor	-107 dBm
Power Supplies	+12 V (115 mA) +3.3 V (35 mA) -5 V (150 mA) -8 V (68 mA)
Power Dissipation	2.75 W
Connectors	SMA, 1 x Jack RF, 1 x Jack IF, 1 x Jack LO
Dimensions	57.2 x 53.3 x 13.9 mm 2.25" x 2.1" x 0.55"
Weight	36 g, 1.27 oz
Temperature Limits	0° to +40° C, operating -40° to +85° C, storage
Warranty	1 year, repair or return at the sole discretion of HYPERLABS, Inc.

\* NOTE: Harmonic distortion measurements taken under test conditions: LO = 1 GHz + 10 dBm, Pin = 100 MHz 0 dBm.



Figure 1: HL9313 Sampler / Harmonic Mixer

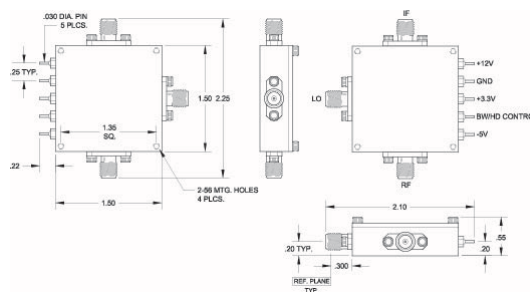


Figure 2: Dimensional Drawing of the HL9313

## Applications

- Frequency down conversion
- Harmonic mixing
- Use in network analyzers, TDRs, sampling oscilloscopes, and spectrum analyzers
- High-speed front end for A/D converters

## Export Information and Restrictions

An export license may be required to purchase this product from outside of the United States. Please contact HYPERLABS for more information.