

HL9333 Sampler / Harmonic Mixer IC

Features and Technical Specifications

PRODUCT SUMMARY

The HL9333 is a high-precision sampler / harmonic mixer integrated circuit offering excellent linearity, low noise and flat frequency response up to 20 GHz (RF).

APPLICATIONS

- Harmonic down conversion
- High-speed front-end for A/D converters
- Use in network analyzers, TDRs, sampling oscilloscopes, and spectrum analyzers
- Reference design eval boards available

OPTIONS

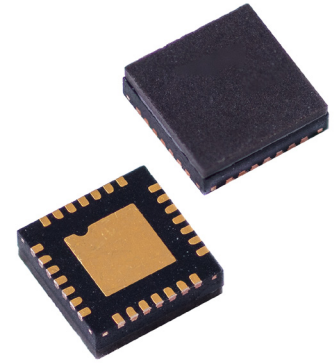
The following options are available:

- HL9333-SMD** package
- HL9333-EVAL-MA** - mounted to eval board with MACOM balun (2-18 GHz)
- HL9333-EVAL-HL** - mounted to eval board with HYPERLABS balun (1 MHz to 20 GHz)

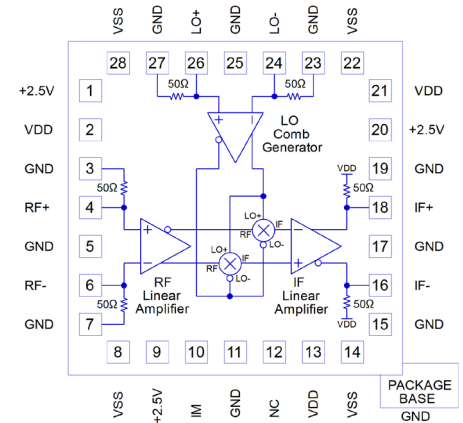
EXPORT RESTRICTIONS

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

RF Bandwidth (typical)	17 GHz (-3dB) 19 GHz (-6dB)
LO Input Frequency, Square Wave	100 MHz to 2.5 GHz $t_r/t_f = 50$ ps (20-80%) max
LO Input Amplitude, Square Wave	300 mV _{pp} (600 mV _{pp} Diff) minimum
Conversion Loss	20 dB
LO to RF Isolation	67 dB
Linearity, Second Harmonic Distortion*	-68 dBc
Linearity, Third Harmonic Distortion*	-66 dBc
Input Noise Floor	-130 dBm/Hz
Power Supplies	+6.0 V, 175 mA (VDD) +2.5 V, 110 mA (+2.5V) -5.0 V, 320 mA (VSS) +/- 5% Voltage Tolerance
Power Dissipation	3.0 W
Maximum Input Power	+15 dBm
Dimensions	4.0 x 4.0 x 1.25 mm, 28 lead QFN
Packaging	Gel-Pak
Case Temperature	+85 °C, max operating +245 °C, for 90 seconds max processing
RoHS Compliant	Yes
REACH Compliant	Yes



HL9333 4 x 4 mm QFN Package, 28 pin



HL9333 Port Assignments

* NOTE: Harmonic distortion measurements taken under test conditions: LO = 1 GHz square wave, RF = 100 MHz @ 0 dBm.