

HPA14 LVPECL OSCILLATORS

14 pin Dual-in-Line





DESCRIPTION

HPA14 series LVPECL output oscillators cover the frequency range 60MHz to 320MHz. The part utilizes a crystal operating in third overtone mode (Non-PLL)

SPECIFICATION

Frequency Range: 60.0MHz to 320.0MHz **Output Logic** LVPECL Phase Noise: See table Frequency Stability: See table

Operating Temp Range

-10° to +70°C Commercial: -40° to +85°C Industrial: Input Voltage: +2.5VDC or +3.3VDC ±5%

Output Voltage

High '1': Vdd -1.025V min. Low '0': Vdd -1.620V max. $(RL = 50\Omega \text{ to Vdd } -2.0V)$

Rise/Fall Times: 0.25ns typical

(20% Vdd to 80% Vdd)

Current Consumption: 75mA max. at 212.50MHz

 50Ω into Vdd-2.0V Load: Start-up Time: 5ms typ., 10ms max.

50%±5% (at Vdd -1.3V) **Duty Cycle:**

Input Static Discharge Prot: 2kV min.

-55°C to +150°C Storage Temperature Range:

Ageing: ±3ppm per year max., ±2ppm

thereafter. At T amb +25°C

Enable/Disable

Enable:

No connection: Both outputs enabled

Disable: Both outputs are disabled when

control pad is taken below 0.3V referenced to ground. Oscillator is always 'on'. (Special request oscillator is off when disabled.) Both Outputs are enabled when

control pad is taken above 0.7 Vcc

referenced to ground.

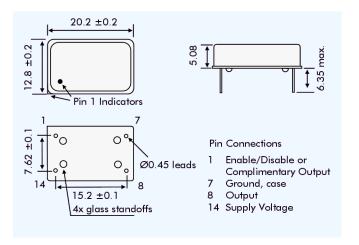
ABSOLUTE MAXIMUM RATINGS

(Permanent damage may be caused if operated beyond these limits.)

Supply Voltage Vdd: +4.6V max

Input Voltage Vi: Vss -0.5 min., VDD +0.5V max. Input Voltage Vo: Vss -0.5 min., Vdd +0.5V max.

OUTLINE & DIMENSIONS



STABILITY OVER TEMPERATURE RANGE

Stability ±ppm	Temperature Range °C	Order Code
25	-10 to +70	Α
50	-10 to +70	В
100	-10 to +70	С
25	-40 to +85	D
50	-40 to +85	E
100	-40 to +85	F

JITTER

Integrated Phase Jitter: 0.25ps typical at 155.520MHz

(12kHz to 20MHz)

3.0ps typical at 155.520MHz Period Jitter (RMS): Period Jitter (peak to peak): 21ps typical at 155.520MHz

PHASE NOISE (155.250MHz)

Offset	dBc/Hz
10Hz	-65
100Hz	-95
1kHz	-120
10kHz	-128
100kHz	-122
1MHz	-120
10MHz	-140

PART NUMBERS

HPA14 oscillator part numbers are derived as follows:

