HPA8 LVPECL OSCILLATORS

8 pin Dual-in-Line

DESCRIPTION

HPA8 series LVPECL output oscillators cover the frequency range 60MHz to 320MHz. The part utilizes a crystal operating in third overtone mode (Non-PLL)

RoHS COMPLIANT 2002 / 95 /EC

SPECIFICATION

Frequency Range:	60.0MHz to 320.0MHz
Output Logic	LVPECL
Phase Noise:	*See table*
Frequency Stability:	*See table*
Operating Temp Range	
Commercial:	-10° to +70°C
Industrial:	-40° to +85°C
Input Voltage:	+2.5VDC or +3.3VDC ±5%
Output Voltage	
High '1':	Vdd -1.025V min.
Low '0':	Vdd -1.620V max.
	(RL = 50Ω to Vdd -2.0V)
Rise/Fall Times:	0.25ns typical
	(20% Vdd to 80% Vdd)
Current Consumption:	75mA max. at 212.50MHz
Load:	50Ω into Vdd-2.0V
Start-up Time:	5ms typ., 10ms max.
Duty Cycle:	50%±5% (at Vdd -1.3V)
Input Static Discharge Prot:	2kV min.
Storage Temperature Range:	-55°C to +150°C
Ageing:	±3ppm per year max., ±2ppm thereafter. At T amb +25°C
Enable/Disable	
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.)
Enable:	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.)

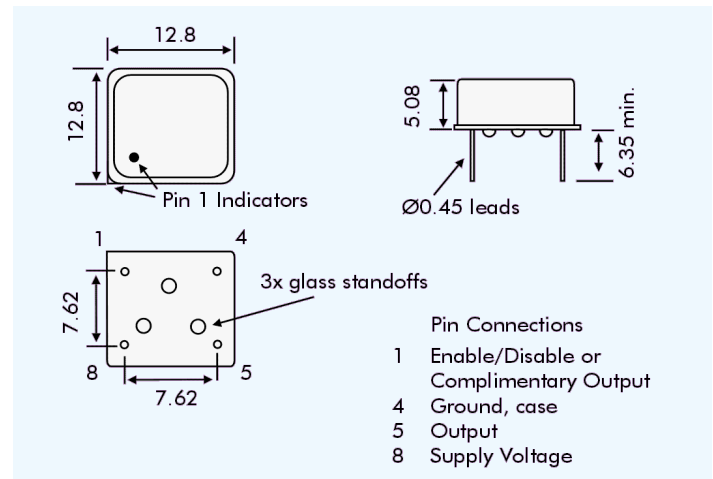|	
Supply Voltage Vdd:	+4.6V max.
Input Voltage Vi:	Vss -0.5 min., VDD +0.5V max.
Input Voltage Vo:	Vss -0.5 min., Vdd +0.5V max.

STABILITY OVER TEMPERATURE RANGE

Stability ±ppm	Temperature Range °C	Order Code
25	-10 to +70	**A**
50	-10 to +70	**B**
100	-10 to +70	**C**
25	-40 to +85	**D**
50	-40 to +85	**E**
100	-40 to +85	**F**

JITTER

Integrated Phase Jitter: (12kHz to 20MHz)	0.25ps typical at 155.520MHz
Period Jitter (RMS):	3.0ps typical at 155.520MHz
Period Jitter (peak to peak):	21ps typical at 155.520MHz

OUTLINE & DIMENSIONS

12.8
12.8
Pin 1 Indicators
5.08
6.35 min.
Ø0.45 leads
1   4
7.62
8   5
7.62
3x glass standoffs

Pin Connections
1 Enable/Disable or Complimentary Output
4 Ground, case
5 Output
8 Supply Voltage

PHASE NOISE (155.250MHz)

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

PART NUMBERS

HPA8 oscillator part numbers are derived as follows:

Example: **3HPA8-A-250.000**

Supply Voltage
3 = 3.3VDC
25 = 2.5VDC
Series Designation
Package Style
Stability Code
(See table)
Frequency