

#### DESCRIPTION

HPW8 series LVPECL output oscillators cover the frequency range 750kHz to 800MHz. The part contains a high 'Q' fundamental crystal and multiplier circuit.

#### SPECIFICATION

Frequency Range:	750.0MHz to 800.0MHz
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:	+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:	1.5ns typical (20% Vdd to 80% Vdd)
Current Consumption (15pF load):	
<24MHz:	25mA max.
24.01 to 96MHz:	65mA max.
96.01 to 700MHz:	100mA max.
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.)

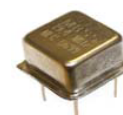
Supply Voltage Vdd:	+4.6V max.
Input Voltage Vi:	Vss -0.5 min., VDD +0.5V max.
Input Voltage Vo:	Vss -0.5 min., Vdd +0.5V max.

#### STABILITY OVER TEMPERATURE RANGE

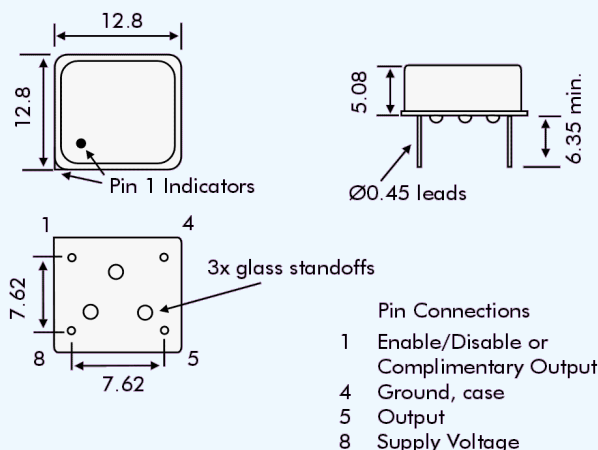
Stability ±ppm	Temperature Range °C	Order Code
25	-10 to +70	<b>A</b>
50	-10 to +70	<b>B</b>
100	-10 to +70	<b>C</b>
25	-40 to +85	<b>D</b>
50	-40 to +85	<b>E</b>
100	-40 to +85	<b>F</b>

#### JITTER

Integrated Phase Jitter: (12kHz to 20MHz)	2.6ps typical at 155.520MHz
Period Jitter (RMS):	4.3ps typical at 155.520MHz
Period Jitter (peak to peak):	27ps typical at 155.520MHz



#### OUTLINE & DIMENSIONS



#### PHASE NOISE (155.250MHz)

Offset	dBc/Hz
10Hz	-65
100Hz	-95
1kHz	-120
10kHz	-125
100kHz	-121
1MHz	-120
10MHz	-140

#### PART NUMBERS

HPW8 oscillator part numbers are derived as follows:

