

DESCRIPTION

HPW14 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 $\pm$ 5%
Output Voltage	
High '1':	Vdd -1.025V min.
Low '0':	Vdd -1.620V max.
	(RL = 50 Ω 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:	50 Ω into Vdd-2.0V
Start-up Time:	5ms typ., 10ms max.
Duty Cycle:	50% $\pm$ 5% (at Vdd -1.3V)
Input Static Discharge Prot:	2kV min.
Storage Temperature Range:	-55°C to +150°C
Ageing:	$\pm$ 3ppm per year max., $\pm$ 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

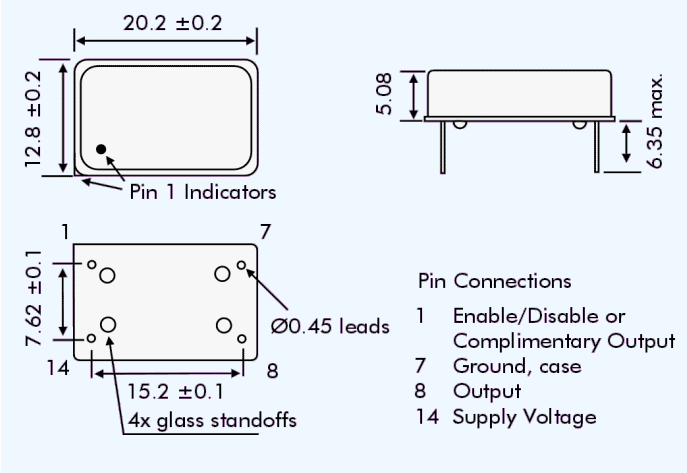
Stability $\pm$ ppm	Temperature Range °C	Order Code
25	-10 to +70	A
50	-10 to +70	B
100	-10 to +70	C
25	-40 to +85	D
50	-40 to +85	E
100	-40 to +85	F

JITTER

Integrated Phase Jitter:	2.6ps typical at 155.520MHz
(12kHz to 20MHz)	
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

HPW14 oscillator part numbers are derived as follows:

Example:

3HPW14-A-250.000

Supply Voltage
3 = 3.3VDC

Series Designation

Package Style

Stability Code
(See table)

Frequency