

14 pin DIL High Frequency HCMOS

FEATURES

- Industry-standard 14 pin DIL package
- Frequency Range 125.01MHz to 200.0MHz
- High Q fundamental crystal and low jitter multiplier circuit
- Supply voltage +3.3Volts
- Designed for low-cost applications



DESCRIPTION

HV14 series oscillators provide a high quality HCMOS output at frequencies from 125.01MHz to 200.0MHz. Phase and RMS period jitter are kept within low limits. The oscillator has a tristate function available to conserve power.

SPECIFICATION

Model:	'HV' Series
Output Logic:	LVC MOS
Frequency Range:	125.01MHz to 200.0MHz
Supply Voltage Vdd:	+3.3VDC ±5%
Supply Voltage Code:	'3'
Output Logic 'HIGH', '1':	90% Vdd min.
Output Logic 'LOW', '0':	10% Vdd max.
Integrated Phase Jitter: (12kHz to 20MHz)	2.3ps typical; 4ps max. for 155.520MHz
Period jitter RMS: (Decoupling capacitor between Vdd and ground.)	4.0ps typical for 155.520MHz
Period Jitter Peak to Peak: (Decoupling capacitor between Vdd and ground.)	27ps typical, 30ps for 155.520MHz
Current Consumption (15pF Load):	45mA max.
Rise/Fall Time:	2.4ns typical (0.3V to 3.0V, 15pF load)

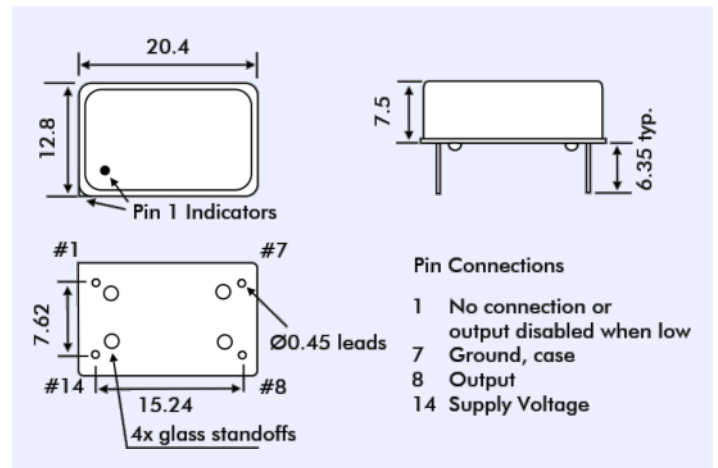
PHASE NOISE

Offset	Frequency 155.520MHz
10Hz	-65 dBc/Hz
100Hz	-95 dBc/Hz
1kHz	-120 dBc/Hz
10kHz	-125 dBc/Hz
100kHz	-121 dBc/Hz
1MHz	-120 dBc/Hz
10MHz	-140 dBc/Hz

OUTLINE & DIMENSIONS

GENERAL SPECIFICATION

Frequency Stability:	From ±25ppm over -40° to +85°C (See part number table)
Load:	15pF
Ageing:	±3ppm max. first year ±2ppm per year thereafter
Start-up Time:	10ms maximum
Duty Cycle:	50% ±5% measured at 50% Vdd
Storage temperature:	-55° to +100°C
Enable/Disable (Tristate)	
Enable:	No connection or 70% Vdd applied to Tristate pad.
Disable:	30% Vdd max. to tristate pad.
Input Static Discharge protection:	2kV minimum.



ABSOLUTE MAXIMUM RATINGS

Permanent damage may occur if units are operated beyond specified limits.

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

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PART NUMBER FORMAT

Example 3HV14-DT-155.52

3 HV14 - D T - 155.52

Supply Voltage:
3 = 3.3 Volts

Series Designation:
HV14

Stability over Temperature Range:

A = ±25ppm over -10° to +70°C

B = ±50ppm over -10° to +70°C

C = ±100ppm over -10° to +70°C

D = ±25ppm over -40° to +85°C

E = ±50ppm over -40° to +85°C

F = ±100ppm over -40° to +85°C

Tristate (Enable/Disable) Function

Nominal Frequency (MHz):