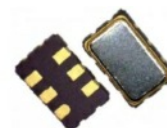


3.2 x 2.5 x 1.0mm 6 pad SMD

13.5MHz to 220.0MHz

DESCRIPTION

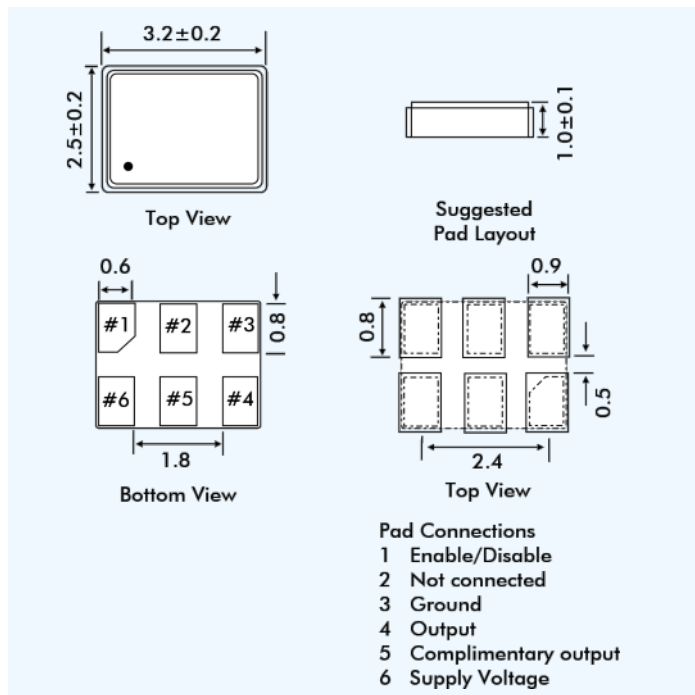
- Femtosecond integrated phase jitter (200fs typical 12kHz - 20MHz)
- Ultra-low phase noise (-144dBc/Hz at 100kHz)
- Superior performance and low price
- Supply voltage 1.8, 2.5 or 3.3 Volts



SPECIFICATION

Frequency Range:	13.5MHz to 220.0MHz
Output Logic:	Differential LVDS square wave
Phase Noise:	See table
Frequency Stability:	See table
Operating Temp Range	
Commercial:	-10° to +70°C
Industrial:	-40° to +85°C
Input Voltage:	+1.8 or 2.5V ±5%, +3.3VDC ±10%
Output Voltage	
High '1':	1.4V typ., 1.6V max., (RL = 100Ω)
Low '0':	0.9V min., 1.1V typ., (RL = 101Ω)
Integrated Jitter:	0.2ps typical, 0.5ps maximum (12kHz to 20MHz)
Output Swing:	250mV minimum, 350mV typical 450mV max, RL=100Ω
Load:	100Ω between outputs
Rise/Fall Times:	0.3ns typical, 0.5ns max. (from 20% Vdd to 80% Vdd)
Duty Cycle:	50±5% (measured at 50% waveform)
Current Consumption:	16mA typical, 27mA maximum
Enable/Disable (Pad 1)	
Enable:	No connection or min. 70% Vdd is applied to pad 1.
Disable:	30% Vdd max. applied to pad 1. Output: internal pull-up. Oscillation enable time is 2ms max.
Start-up Time:	5ms typ. 10ms max.
Ageing:	±3ppm per year max., ±2ppm thereafter. At T amb +25°C

OUTLINE & DIMENSIONS



ABSOLUTE MAXIMUM RATINGS

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

Supply Voltage: V_{ss} -0.5V min., 5.0V max.

Input Voltage: V_{ss} -0.5V min., V_{dd} +0.5V max.

TYPICAL PHASE NOISE (dBc/Hz)

Offset	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz
62.5MHz	-50	-82	-116	-138	-144	-149
156.25MHz	-50	-80	-115	-135	-142	-147

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

N.B. Other stability values are available upon request
Indicate by replacing A-F stab code with C or I, followed by value
E.g. C20 = ±20ppm over -10C +70C

ENVIRONMENTAL PERFORMANCE SPECIFICATION

'Green' Requirements:	RoHS 6/6 (2002-95/EC) and WEEE (2002/96/EC) Compliant
MSL Level:	Level 1 per IPC/JEDEC J-STD-020D.1
Storage Temperature Range:	-55°C to +125°C
Humidity:	85% RH, 85°, 48 hours
Hermetic Seal:	Leak rate 2*10 ⁻⁸ Atm-cm ³ /sec. max.
Solderability:	MIL-STD-202F Method 208E
Reflow:	260°C for 10sec. max., 2 times max.
Vibration:	MIL-STD-202F Method 204, 35g 50 to 2000Hz
Shock:	MIL-STD-202F Method 213B test condition E, 1000g, ½ sine
ESD Protection:	2kV max. Human body model
Contact pad surface finish:	Gold (Au) (0.3~1.0µm) on Nickel (Ni) (1.27~8.89µm)
Weight per unit:	160mg typical

PART NUMBERS

Example: 25HDK5361-A-156.250

