

VOLTAGE CONTROLLED CRYSTAL OSCILLATOR - VCXO

QEV 51-KO & QEV 51-KH



CONSUMER & INDUSTRIAL THROUGH HOLE VCXO

Description

Our QEV51-KO is a sinewave Voltage Controlled Crystal Oscillator in a package 20 x 20 x 10 mm which is designed for industrial temperature range of -40° C to +85° C with a sinusoidal output. It allows an upper frequency of 200 MHz by using an overtone quartz resonator in a sealed package and a pulling range up to ± 100 ppm.

This type of product is well suited for very low phase noise applications (typically -120 dBc/Hz @ 100 Hz and typically -155 dBc/Hz @ 10 kHz for F= 150 MHz). Using ACMOS technology, the QEV51-KH offers the same performance up to 120 MHz.



Frequency range

14 MHz to 200 MHz

Applications

Telecommunication system
SONET / SDH / ATM
Multiplexing
Digital switching
Phase locking

Features

Temperature ranges: up to -40° C to +85° C
Frequency stability: ± 15 to ± 50 ppm
Calibration (@25° C $\pm 2^\circ$ C): ± 10 ppm
Supply voltage: +5 V $\pm 5\%$
Current consumption: 35 to 50 mA
Load (KH version): 15pF/10NTTL-gates
Load (KO version): 0 dBm / 50 Ω
Sub-harmonics (KO version): > -25 dBc
Spurious (KO version): > -80 dBc
Rise / fall time (KH version): 5 ns
Ageing: ± 3 ppm / 1st year
Pulling range: $\geq \pm 50$ ppm to ± 100 ppm min.
@ 2.5 Vdc ± 2 Vdc, slope positive
Duty cycle: 50/50 $\pm 20\%$
Stability vs. power supply and load: ± 5 ppm

Minimum ordering information requirement

(See [Table 1](#) for available combinations)

(See [page 4-37](#) for package drawing)

Example: QEV 51 - KO 155.52 MHz 100LQ15

☐	☐	☐	☐
Output signal			
KO = Sinus			
KH = AHCMOS			
Pulling range			
± 50 ppm			
± 75 ppm			
± 100 ppm (2)			
Temperature			
LQ = 0° C ~ +70° C			
HQ = -20° C ~ +70° C			
DT = -40° C ~ +85° C *			
Stability			
15 = ± 15 ppm *			
25 = ± 25 ppm			
50 = ± 50 ppm			

Note:

- Options with the same marker may not be combined with each other.
- Not available for high frequency, see table 1.

Table 1:

Other temperature ranges
and stability available

	QEV 51-KH	QEV 51-KO	
	AHCMOS output	Sine output	
Frequency range	14 - 120 MHz	14 - 150 MHz	150 - 200 MHz
Temperature range	LQ to DT	LQ to DT	
Control voltage @2.5V,Z>10 K Ω)	0 V to 5 V	0 V to 5 V	
Pulling range (positive slope)	$\geq \pm 100$ ppm	$\geq \pm 100$ ppm	$\geq \pm 75$ ppm