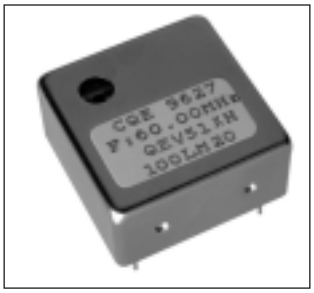
VOLTAGE CONTROLLED CRYSTAL OSCILLATOR - VCXO

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 ± 2° C):	± 10 ppm
Supply voltage:	+5 V ± 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:	>±50 ppm to ±100 ppm min. @ 2.5 Vdc ± 2 Vdc, slope positive
Duty cycle:	50/50 ± 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

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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:
1. Options with the same marker may not be combined with each other.
2. 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 KΩ)	0 V to 5 V	0 V to 5 V	
Pulling range (positive slope)	≥ ± 100 ppm	≥ ± 100 ppm	≥ ± 75 ppm