CONSUMER & INDUSTRIAL SMD XO

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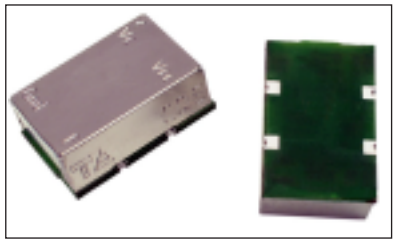
Description



The QEN 60 series uses a hermetically sealed crystal unit mounted on a printed circuit board. The hermetically sealed crystal unit allows for controlled temperature performance as well as an improved ageing performance. The QEN 60 series is more accurate than a DIL XO and is well suited for high performance. They are available in 5 V and 3.3 V, and offer a TTL/HCMOS compatible output up to 160 MHz in 5 V with a tristate option. The QEN 60 uses a standard fundamental or overtone mode crystal to produce outputs up to 120 MHz. A PLL technology can be used above 40 MHz to offer an extended frequency range up to 200 MHz.

Frequency range

1.5 MHz to 160 MHz

Applications

Telecom systems
Avionics instrumentation
Railway
Test equipment

Features

Temperature ranges:		up to -40° C to +85° C
Frequency stability:		±15 to ±100 ppm
Supply voltage:		+5 V, +3.3 V
Current consumption:	@ (5 V):	25 to 50 mA
	@ (3.3 V):	12 to 20 mA
Load: @ (5V):		10 to 50 pF/10 TTL-gates
(function of the frequency)	@ (3.3 V):	15 pF
Option duty cycle:		50/50 ± 10 %
Option:		Enable/Disable on pin 1
Ageing (at 45 °C/1st year) :		< ± 5 ppm

Minimum ordering information requirement

(See Table 1 for available combinations)
(See page 4-18 for package drawing)

Example: QEN 60 - AHR 110 MHz DT50 /TR

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Supply voltage
A(H/T) = 5 V
B(H/T) = 3.3 V
Option
R = 50/50 ± 10%
I = Enable/Disable
Temperature range
LQ = 0° C ~ +70° C
HQ = -20° C ~ +70° C
DT = -40° C ~ +85° C ◊
Frequency stability
± 25 ppm ◊
± 30 ppm
± 50 ppm
± 100 ppm
Tape & Reel
TR - Mandatory option for quantity > 1 kpcs

Note:
1. Options with the same marker may not be combined with each other.
2. Frequency stability including 25° C calibration, temperature, Vcc and load change, and first year ageing.

Table 1:
Other temperature ranges and stabilities available

	QEN 60-AH 5 V supply voltage			QEN 60-BH 3.3 V supply voltage			Option Enable / disable on pin 1
	±15ppm	±15ppm	±15ppm	±15ppm	±15ppm	±15ppm	
1.5 MHz - 40 MHz	Yes	Yes	Yes	Yes	Yes	Yes	High = enable on pin 3 Low = High Z on pin 3
40 MHz - 70 MHz	Yes	Yes	Yes	Yes	Yes	Yes	
70 MHz - 100 MHz	Yes	Yes	Yes	Yes	Yes	Yes	
100 MHz - 160 MHz	Yes	Yes	Yes				