INDUSTRIAL & MILITARY SMD XO

Description

The QEN 79 series is a true hybrid construction with chip and wire bonding to a ceramic substrate for high reliability and small size. The crystal resonator is mounted on a 3 points supporting pad bonded to the ceramic substrate. They are designed to operate at extended temperature up to -55° C to +125° C and available to 100 MHz. This series is designed to withstand tough mechanical environment and class B screening if applicable. It's presented in a J-lead version and both supply voltage (5 V and 3.3 V). It offers an enable/disable option.

An alternative is available in a leadless version, the QEN 92, which has the same design but offers a tristate function in standard. Consult your local sales office to know available solutions.

Frequency range

1.75 MHz to 100 MHz

Applications

Cellular base stations
PCS base stations
Synthesizers
Test equipment
Portable instrumentation and avionics

Features

Temperature ranges:	up to -55° C to +125° C
Frequency stability:	±15 to ±100 ppm
Supply voltage:	+5 V or +3.3 V
Current consumption:	@ (5 V): 25 to 40 mA
	@ (3.3 V): 12 to 20 mA
Load:	@ (5 V): 50pF/10TTL-gates
	@ (3.3 V): 15 pF
Option duty cycle:	50/50 ± 5 %
Option: enable/disable on pin 1	Package 79
Tristate output:	Package 92
Option:	screening B

Ageing (45°C/1st year): ≤ ± 5 ppm

Minimum ordering information requirement

(See Table 1 for available combinations)
(See page 3-17 and 3-18 for package drawing)

Example: QEN 79 - AHR 50 MHz DT50 SB/T

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Package
79 = J-leads
92 = leadless ◊ *
Supply voltage
AH = 5 V
BH = 3.3 V
Option
R = 50/50 ± 5%
I = tristate *
Temperature range
DT = -40° C ~ +85° C
AY = -55° C ~ +125° C ∞
Frequency stability
± 25 ppm ∞
± 50 ppm
± 100 ppm
Screening option: SB
Tinned pins: T ◊

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

Table 1:
Other temperature ranges and stabilities available

	QEN 79/92-AH 5 V supply voltage		QEN 79/92-BH 3.3 V supply voltage		Tristate on pin 1 Package 92	Option Tristate on pin 1 Package 79
	±25 ppm	±50 ppm	±25 ppm	±50 ppm	"0" on pin 1 = High Z on pin 3 "1" on pin 1 = enable on pin 3 Attention: should pin 1 not be used, please always tie to Vcc	
1.5 MHz - 30 MHz	Yes	Yes	Yes	Yes		
30 MHz - 80 MHz	Yes	Yes	Yes	Yes		
80 MHz - 100 MHz	Yes	Yes				