

FULL MILITARY DIL XO

These high performance DIL clock oscillators are designed for high vibration and extended temperature range up to -55° C to +125° C.

The QEN55-BH/CH utilize HCMOS active circuit technology up to 40 MHz and an ACMOS technology up to 70 MHz. The crystal resonator is mounted on 3 points on a true hybrid alumina substrate with gold printed circuit path and is well suited for military and avionics applications. The same performances are presented for higher environmental severity in a 14 pins DIL package under the designation QEN49-BH/CH.

In the overlapping range between 14 MHz and 40 MHz, the choice depends on the other available options such as duty cycle tolerance and the tristate output.



Frequency range

3.5 KHz to 70 MHz

Applications

- Test equipment
- Military airborne
- Space applications

Features

- Temperature ranges: up to -55° C to +125° C
- Frequency stability: ±25 to ±100 ppm
- Supply voltage: +5 V
- Current consumption: 10 to 50 mA
- Load (BH version): 25pF/3TTL-gates
- Load (CH version): 15pF-25pF/10TTL-gates
- Option duty cycle:
 - (BH version up to 14 MHz): 50/50 ± 5 %
 - (BH/CH version from 14 MHz): 50/50 ± 10 %
- Option Enable/Disable: Up to 14 MHz: Version BH
- Option tristate output: Version CH
- Option external trimmer: 3 to 20 pF up to 30 MHz on pin 1
- Option screening: B or S

Ageing (45°C/1st year) : ≤ ± 5 ppm

Minimum ordering information requirement

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

(See page [3-19](#) for package drawing)

Example: QEN 55 - BHR 16 MHz AY50 SB / T

Package

- 55 = DIL 4 pins
- 49 = DIL 14 pins

Option

- R = 50/50 ± 10 % (or ± 5 %)
- I = enable/disable *
- J = tristate *
- T = trimmer *

Temperature range

- DT = -40° C ~ +85° C •
- AY = -55° C ~ +125° C ∞

Frequency stability

- ± 25 ppm ∞
- ± 50 ppm
- ± 100 ppm

Screening option: SB / SS •

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 stability available

	QEN 49/55-BH		QEN 49/55-CH		Option Enable / disable on pin 1 Version BH	Option Tri-state on pin 1 Version CH
	±25 ppm	±50 ppm	±25 ppm	±50 ppm		
3.5 kHz - 14 MHz	Yes	Yes			"1" on pin 1 = disable on pin 8 "0" on pin 1 = enable on pin 8	"1" on pin 1 = enable on pin 8 "0" on pin 1 = High Z on pin 8
14 MHz - 40 MHz	Yes	Yes	Yes	Yes		
40 MHz - 70 MHz			Yes	Yes		

Attention: should pin 1 not be used, please always tie to Vcc