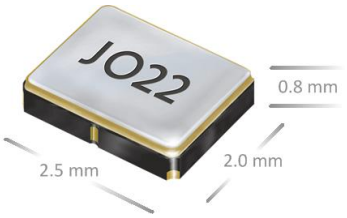
- Product Announcement -

NEW: JO22 32.768 kHz

Crystal Oscillator
in miniature SMD package



Small-sized SMD oscillator with 32.768 kHz

The JO22 32.768kHz is a very small size SMD oscillator which is only offered in a frequency of 32.7680 kHz.

This oscillator uses an internal AT-cut crystal blank, which ensures a better frequency stability than tuning fork crystal based solutions.

Due to the usage of the AT-cut crystal blank, the JO22 32.768kHz offers a best frequency of +/-25ppm in an operating temperature range of -20°C ~ +70°C. The oscillator is also available in wider temperature ranges, like -40°C ~ +85°C with a frequency stability of +/-30ppm or -40°C ~ +125°C with a stability of +/-100ppm.

It offers a full swing HCMOS compatible output required to drive standard logic.

The JO22 32.768kHz series is particularly suitable for miniaturized electronic devices with very limited space on printed circuit board.

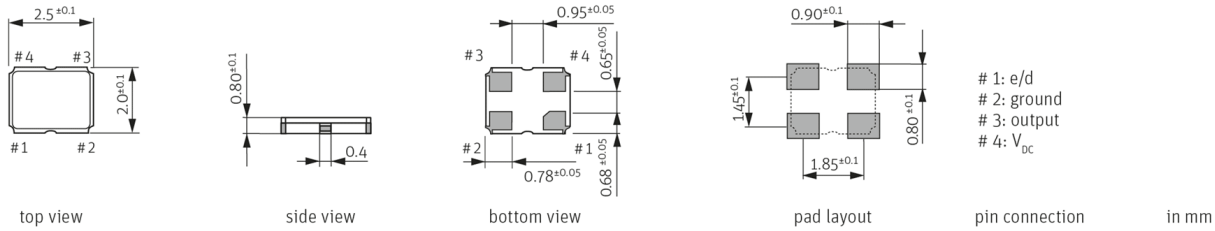
The JO22 32.768kHz complies with the EU RoHS directive and is optimally suitable for fast automatic assembly lines.

Key-Features of the JO22 32.768kHz:

- miniature-package: 2.5mm x 2.0mm x 0.8mm
- uses AT-cut crystal for best frequency stability
- best stabilities and temp. ranges: ± 25 ppm (-20°C ~ +70°C)
± 30 ppm (-40°C ~ +85°C)
± 50 ppm (-40°C ~ +105°C)
± 100 ppm (-40°C ~ +125°C)
- output frequency: 32.768 kHz
- variable supply voltage: 1.8V (- 10%) ~ 3.3 (+ 10%)
- very low current consumption: less than 120µA typ.
- power save & Tristate function: less than 10µA if disabled
- typical applications: Real Time Clocks (RTC)
- small packaging area and light weight
- suitable for Lead-free soldering process at 260°C max
- 100% lead-free
- RoHS compliant

RoHS compliant | Pb free | REACH compliant | Conflict mineral free

Dimensions:



top view | side view | bottom view | pad layout | pin connection | in mm

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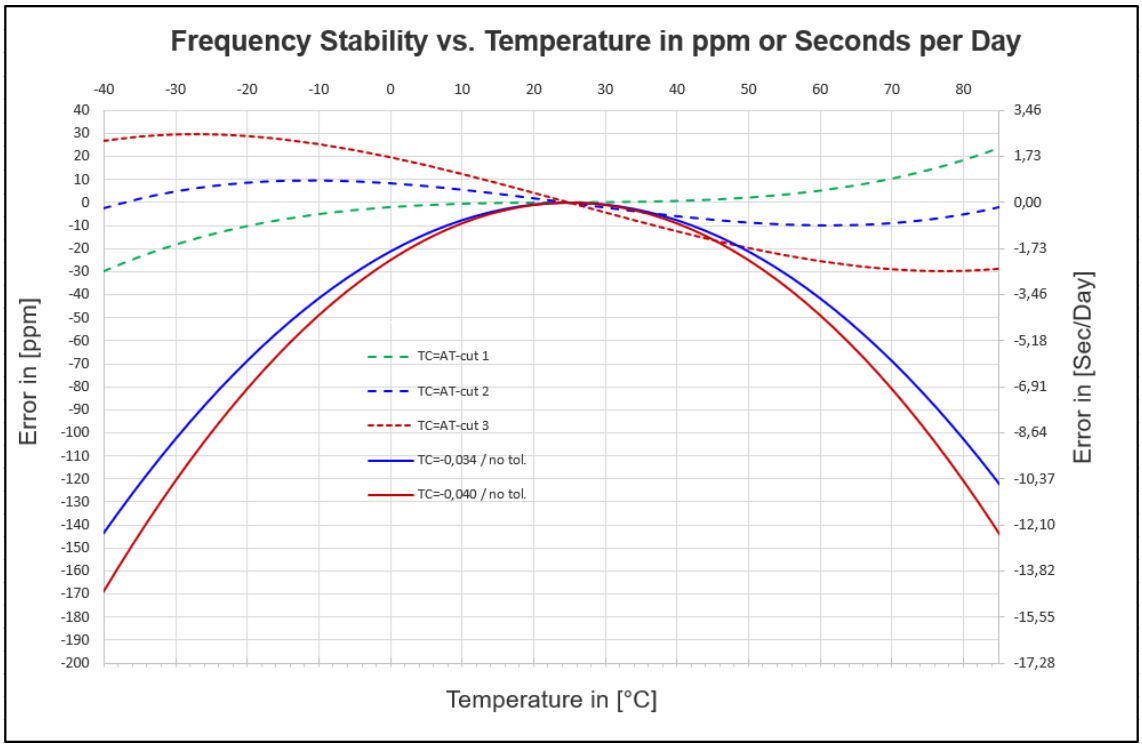
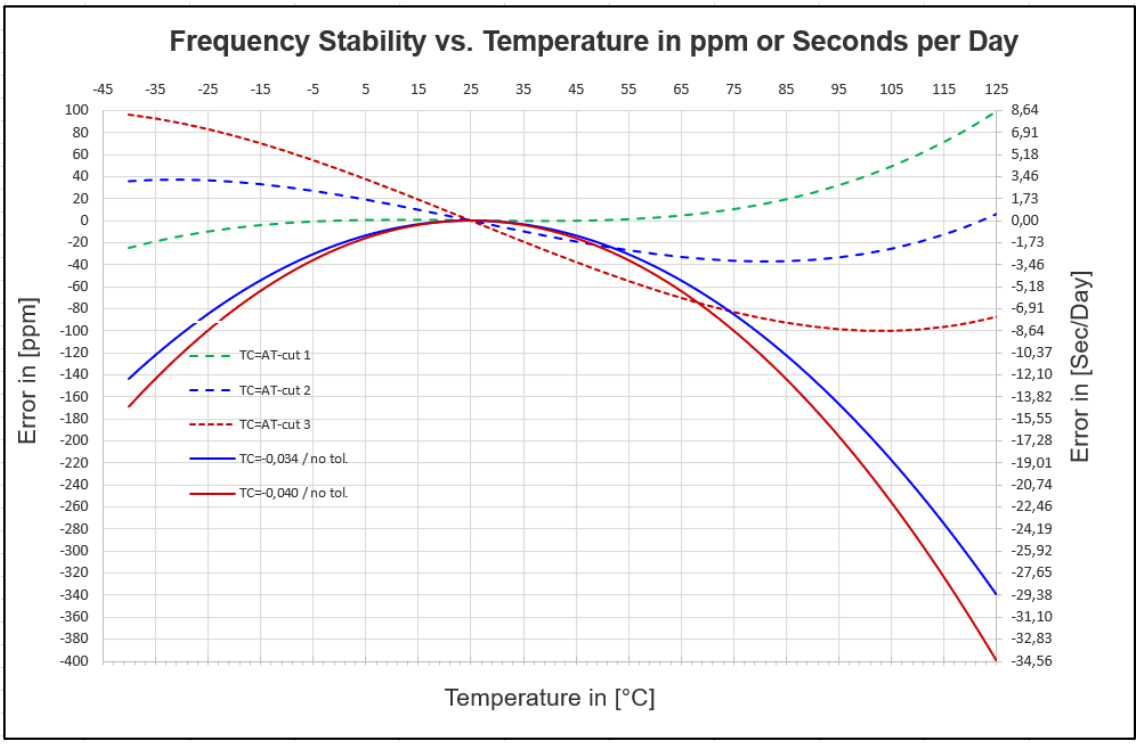
Tel.: (+39) 0536 811616 - Fax.: (+39) 0536 811500 e-mail: bce@bce.it - Website: www.bce.it

Special Features:

- Improved frequency stability vs. tuning-fork based 32.768kHz oscillators, as an AT-cut crystal blank is used. See below a comparison:





B.C.E. ELECTRONICS
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SYSTEM CERTIFICATION ISO 9001 SGS

New product / improved version ?:

Published on the Homepage as a new product, however certain customer projects have already been handled.

Known competitors:

Competitor product	TXC 7XZ (3225) und 8WZ (2520) also AT-cut based	Kyocera KC2520B 32.768kHz also AT-cut based	NDK NZ3225SH & NZ2520SH also AT-cut based
Market introduction	2013 (3225) bzw. 2017 (2520)	?	?
Differences vs. competitor products	JO22 & JO32 32.768kHz have a slightly lower current consumption than TXC types	JO22 & JO32 32.768kHz have a slightly higher current consumption than Kyocera type	JO22 & JO32 32.768kHz is almost equal to the NDK type
Advantages vs. competitor products	TXC only in T0 und T1 JO22 and JO32 up to T3 ! JO22 and JO32 with variable supply voltage	Kyocera only in T1 JO22 and JO32 up to T3 !	NDK NZ3225SH only in T1 NDK NZ2520SH up to T3 NDK most probably only for fixed supply voltage
Disadvantages vs. competitor products	none	JOxx variable supply voltage up to 3.3V, Kyocera up to 5.0V	no significant difference

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This oscillator uses an internal AT-cut crystal blank, which ensures a better frequency stability than tuning fork crystal based solutions.

Due to the usage of the AT-cut crystal blank, the JO32 32.768kHz offers a best frequency of +/-25ppm in an operating temperature range of -20°C ~ +70°C. The oscillator is also available in wider temperature ranges, like -40°C ~ +85°C with a frequency stability of +/-30ppm or -40°C ~ +125°C with a stability of +/-100ppm.

It offers a full swing HCMOS compatible output required to drive standard logic.

The JO32 32.768kHz series is particularly suitable for miniaturized electronic devices with very limited space on printed circuit board.

The JO32 32.768kHz complies with the EU RoHS directive and is optimally suitable for fast automatic assembly lines.

Key-Features of the JO32 32.768kHz:

- miniature-package: 3.2mm x 2.5mm x 1.0mm
- uses AT-cut crystal for best frequency stability
- best stabilities and temp. ranges: ± 25 ppm (-20°C ~ +70°C)
± 30 ppm (-40°C ~ +85°C)
± 50 ppm (-40°C ~ +105°C)
± 100 ppm (-40°C ~ +125°C)
- output frequency: 32.768 kHz
- variable supply voltage: 1.8V (- 10%) ~ 3.3 (+ 10%)
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RoHS 2011/65/EC — RoHS compliant | Pb free | REACH compliant | Conflict mineral free

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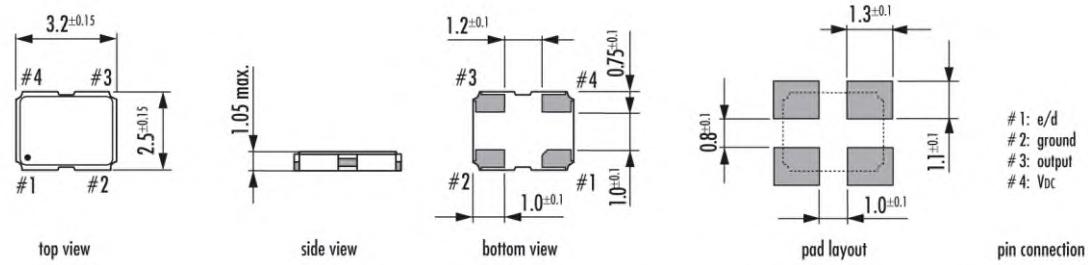

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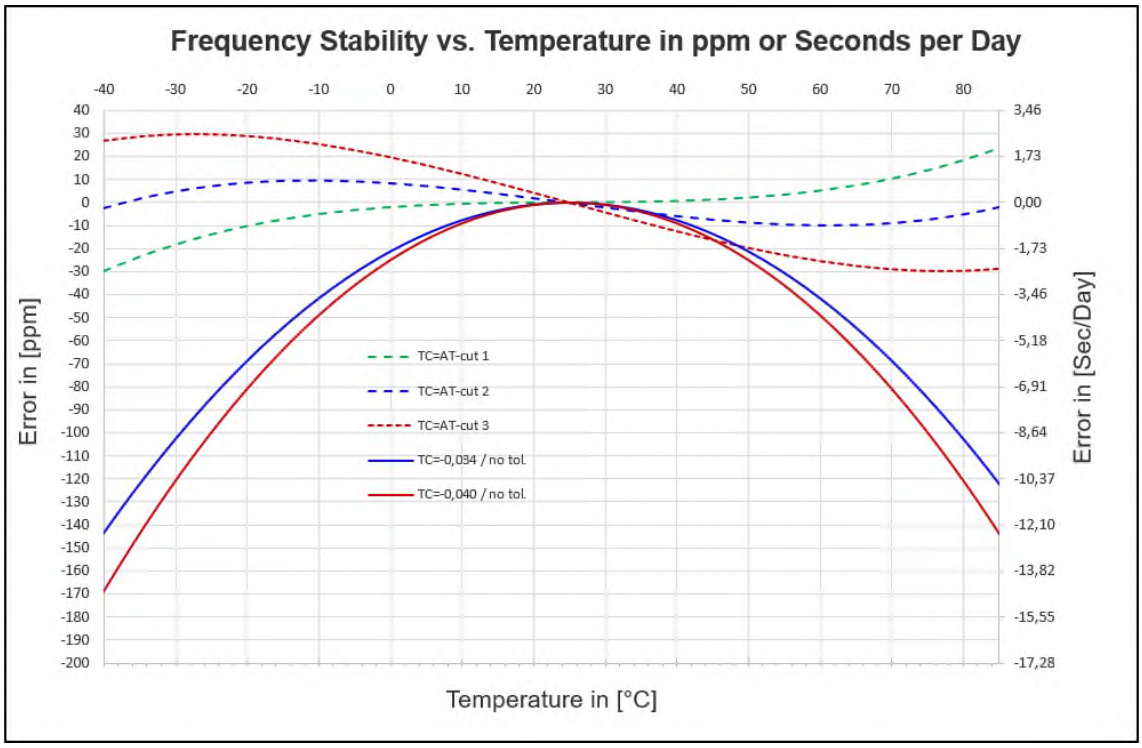

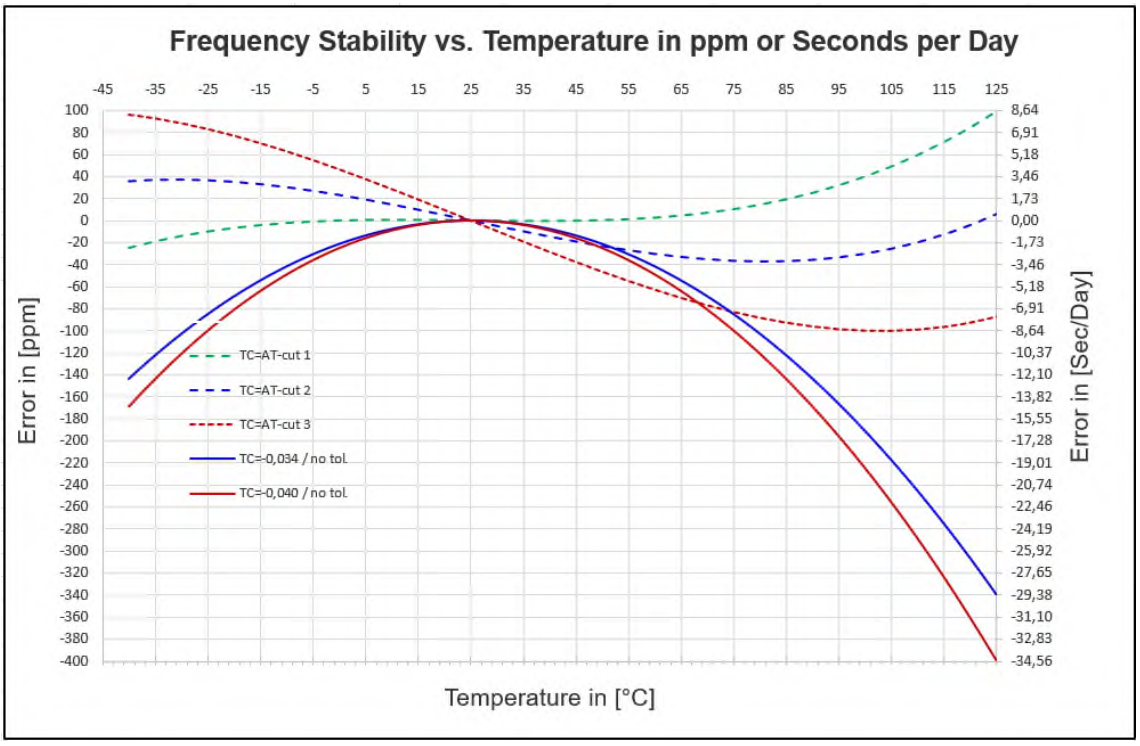

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