



VC-TCXO / TCXO

ULTRA HIGH STABILITY

NEW

Product Number (please contact us)
 TG5032CFN :X1G005391xxxxxx
 TG5032SFN :X1G005401xxxxxx

TG5032CFN

TG5032SFN

- Frequency range : 10 MHz to 40 MHz
- Supply voltage : 3.3 V Typ.
- Frequency / temperature characteristics : $\pm 0.1 \times 10^{-6}$ Max. (-40 °C to +85 °C)
- Frequency aging : $\pm 3.0 \times 10^{-6}$ Max./20years
- External dimensions: 5.0 × 3.2 × 1.45 mm (4 pins)
- Applications : Small Cells, Stratum3
- Features : Ultra high stability, Wide temperature range



Actual size



Specifications (characteristics)

Item	Symbol	TG5032CFN (CMOS output)		TG5032SFN(Clipped sine wave)		Conditions / Remarks
		VC-TCXO	TCXO	VC-TCXO	TCXO	
Output frequency range	f ₀	10 MHz to 40 MHz				Standard frequency
Supply voltage	V _{CC}	10, 12.8, 19.2, 20, 24.576, 25, 25.6, 26, 30.72, 38.4, 38.88, 40 MHz				
Storage temperature	T _{stg}	C: 3.3 V ±5% (Supply voltage range :2.375 V to 3.63 V)				Storage as single product
Operating temperature	T _{use}	-40 °C to +90 °C				Standard temp. range
a) Frequency tolerance	f _{tol}	G: -40 °C to +85 °C				After reflow, +25 °C
b) Frequency/temperature Characteristics	f ₀ -Tc	±1.0 × 10 ⁻⁶ Max.				Reference to (fmax+fmin)/2
c) Frequency/load coefficient	f ₀ -Load	A: ±0.1 × 10 ⁻⁶ Max. / G: -40 °C to +85 °C				
d) Frequency/voltage coefficient	f ₀ -V _{CC}	H: ±0.25 × 10 ⁻⁶ Max. / G: -40 °C to +85 °C				
e) Frequency aging	f _{age}	B: ±0.28 × 10 ⁻⁶ Max. / G: -40 °C to +85 °C				
Holdover stability	-	±0.1 × 10 ⁻⁶ Max.				Load ±10 %
(Constant temperature)	-	±0.1 × 10 ⁻⁶ Max.				V _{CC} ±5%
Free-run accuracy	-	±0.5 × 10 ⁻⁶ Max.				+25 °C, First year
Current consumption	I _{CC}	±3.0 × 10 ⁻⁶ Max.				+25 °C, 20 years
Input resistance	R _{in}	±0.01 × 10 ⁻⁶ Max.(+25 °C , 24 hours)				After 10 days of continuous operation.
Frequency control range	f _{cont}	±0.04 × 10 ⁻⁶ Max.(+25 °C , 24 hours)				After 48 hours of continuous operation.
Frequency change polarity	—	±4.6 × 10 ⁻⁶ Max.				This includes Item a),b),c),d)and e)
Symmetry	SYM	5.0 mA Max.				10 MHz ≤ f ₀ ≤ 26 MHz
Output voltage	V _{OH}	6.0 mA Max.				26 MHz < f ₀ ≤ 40 MHz
Output level	V _{OL}	100 kΩ Min.				V _{CC} - GND (DC)
Rise time / Fall time	t _r / t _f	±5 × 10 ⁻⁶ to ±10 × 10 ⁻⁶				D :V _C =1.5 V ± 1.0 V at V _{CC} =3.3 V
Start-up time	t _{str}	Positive polarity				E: V _C =1.65 V ± 1.0 V at V _{CC} =3.3 V
Output load condition	Load	Positive polarity				
		45 % to 55 %				50 % V _{CC} level, L _{CMOS} ≤ 15 pF
		90 % V _{CC} Min.				
		10 % V _{CC} Max.				
		—				
		0.8 V Min.				Peak to Peak
		—				10 % V _{CC} to 90 % V _{CC} level, Load:15 pF
		5.0 ms Max.				T=0 at 90% V _{CC}
		15 pF				
		10 kΩ//10 pF				

* Note : Please contact us for requirements not listed in this specification.

Product Name TG5032 C FN 30.720000MHz C A G N D A
 (Standard form) ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①Model ②Output (C: CMOS, S: Clipped sine wave) ③Frequency ④Supply voltage (C: 3.3 V Typ.)

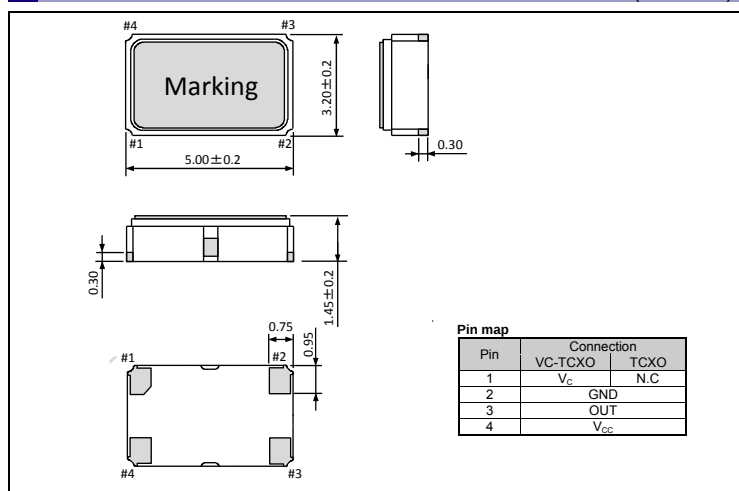
⑤Frequency / temperature characteristics (A: $\pm 0.1 \times 10^{-6}$ Max., H: $\pm 0.25 \times 10^{-6}$ Max., B: $\pm 0.28 \times 10^{-6}$ Max.)

⑥Operating temperature (G: -40 °C to +85 °C) ⑦OE function (N: Non)

⑧Vc function (A: Vc =any, D: Vc =1.5 V, E: Vc =1.65 V, N: Non) ⑨Internal identification code ("A" is default)

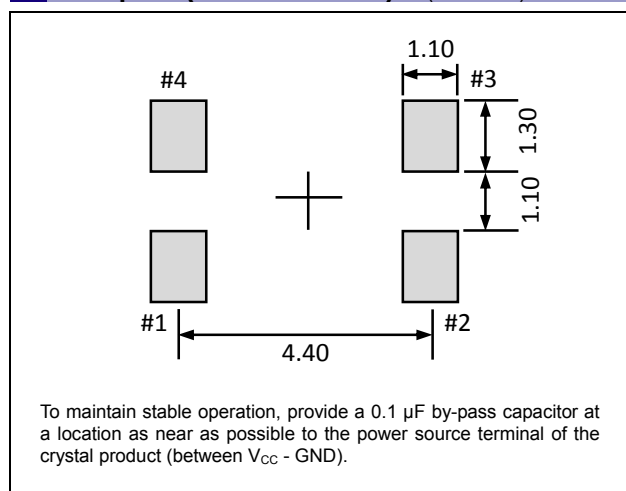
External dimensions

(Unit :mm)



Footprint (Recommended)

(Unit :mm)



PROMOTION OF ENVIRONMENTAL MANAGEMENT SYSTEM CONFORMING TO INTERNATIONAL STANDARDS

At Seiko Epson, all environmental initiatives operate under the Plan-Do-Check-Action (PDCA) cycle designed to achieve continuous improvements. The environmental management system (EMS) operates under the ISO 14001 environmental management standard.

All of our major manufacturing and non-manufacturing sites, in Japan and overseas, completed the acquisition of ISO 14001 certification.

ISO 14000 is an international standard for environmental management that was established by the International Standards Organization in 1996 against the background of growing concern regarding global warming, destruction of the ozone layer, and global deforestation.

WORKING FOR HIGH QUALITY

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Seiko Epson made early efforts towards obtaining ISO9000 series certification and has acquired ISO9001 for all business establishments in Japan and abroad. We have also acquired ISO/TS 16949 certification that is requested strongly by major automotive manufacturers as standard.

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► Explanation of the mark that are using it for the catalog

	► Pb free.
	► Complies with EU RoHS directive. *About the products without the Pb-free mark. Contains Pb in products exempted by EU RoHS directive. (Contains Pb in sealing glass, high melting temperature type solder or other.)
	► Designed for automotive applications such as Car Multimedia, Body Electronics, Remote Keyless Entry etc.
	► Designed for automotive applications related to driving safety (Engine Control Unit, Air Bag, ESC etc).

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