


TCXO / VC-TCXO
HIGH STABILITY

Product Number
TG5032CFN : X1G005391xxxxxx
TG5032SFN : X1G005401xxxxxx

TG5032CFN / SFN

- 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, SyncE, IEEE1588
- Features : High stability, Wide temperature range

TG5032CFN
(CMOS)TG5032SFN
(Clipped Sine)

Specifications (characteristics)

Item	Symbol	TG5032CFN (CMOS output)		TG5032SFN(Clipped sine wave)		Conditions / Remarks
		TCXO	VC-TCXO	TCXO	VC-TCXO	
Output frequency range	fo			10 MHz to 40 MHz		
		10, 12.8, 19.2, 20, 24.576, 25, 25.6, 26, 30.72, 38.4, 38.88, 40 MHz				Standard frequency
Supply voltage	V _{CC}			C: 3.3 V ± 5 % (Supply voltage range: 2.375 V to 3.63 V)		
Storage temperature range	T _{stg}			-40 °C to +90 °C		Storage as single product
Operating temperature range	T _{use}			G: -40 °C to +85 °C		Standard temp. range
a) Frequency tolerance	f _{tol}			±1.0 × 10 ⁻⁶ Max.		After reflow, +25 °C
b) Frequency/temperature Characteristics	fo-Tc			A: ±0.1 × 10 ⁻⁶ Max. / -40 °C to +85 °C H: ±0.25 × 10 ⁻⁶ Max. / -40 °C to +85 °C B: ±0.28 × 10 ⁻⁶ Max. / -40 °C to +85 °C		Reference to (fmax + fmin) / 2
c) Frequency/load coefficient	fo-Load			±0.1 × 10 ⁻⁶ Max.		Load ± 10 %
d) Frequency/voltage coefficient	fo-V _{CC}			±0.1 × 10 ⁻⁶ Max.		V _{CC} ± 5 %
e) Frequency aging	f _{age}			±0.5 × 10 ⁻⁶ Max. ±3.0 × 10 ⁻⁶ Max.		+25 °C, First year +25 °C, 20 years
Holdover stability (Constant temperature)	-			±0.01 × 10 ⁻⁶ Max. (+25 °C, 24 hours) ±0.04 × 10 ⁻⁶ Max. (+25 °C, 24 hours)		After 10 days of continuous operation. After 48 hours of continuous operation.
Wander generation (MTIE, TDEV)	-			-		Compliant with GR-1244CORE, ITU-T G.8262
Free-run accuracy	-			±4.6 × 10 ⁻⁶ Max.		This includes item a), b), c), d) and e)
Current consumption	I _{CC}	5.0 mA Max.	6.0 mA Max.	5.0 mA Max.		10 MHz ≤ fo ≤ 26 MHz 26 MHz < fo ≤ 40 MHz
Input resistance	R _{IN}	-	100 kΩ Min.	-	100 kΩ Min.	Vc- GND (DC)
Frequency control range	f _{cont}	-	±5 × 10 ⁻⁶ to ±10 × 10 ⁻⁶	-	±5 × 10 ⁻⁶ to ±10 × 10 ⁻⁶	D : Vc = 1.5 V ± 1.0 V at V _{CC} = 3.3 V E : Vc = 1.65 V ± 1.0 V at V _{CC} = 3.3 V
Frequency change polarity	-	-	Positive polarity	-	Positive polarity	
Symmetry	SYM	45 % to 55 %		-		50 % V _{CC} level, L CMOS ≤ 15 pF
Output voltage	V _{OH}	90 % V _{CC} Min.		-		
	V _{OL}	10 % V _{CC} Max.		-		
Output level	V _{PP}	-		0.8 V Min.		Peak to Peak
Rise time / Fall time	tr/tf	8.0 ns Max.		-		10 % V _{CC} to 90 % V _{CC} level, Load: 15 pF
Start-up time	t _{str}			5.0 ms Max.		t = 0 at 90% V _{CC}
Output load condition	Load	15 pF		10 kΩ // 10 pF		

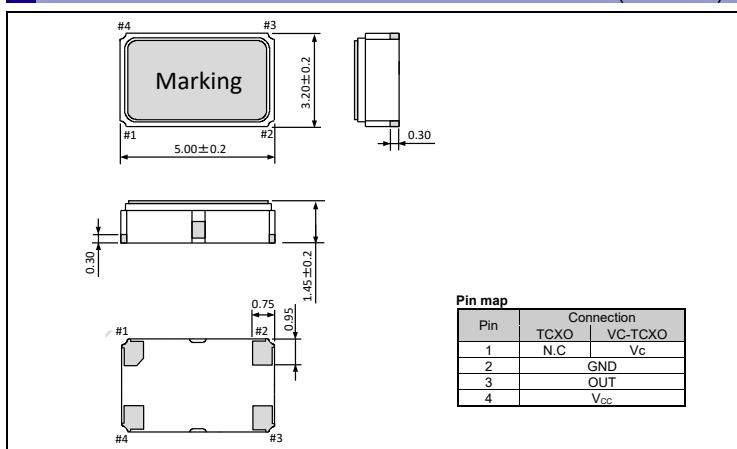
* Note : Please contact us for requirements not listed in this specification.

Product Name **TG5032 C FN 30.72000MHz C A G N D A**
(Standard form) ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Model ② Output (C: CMOS, S: Clipped sine wave) ③ Frequency ④ Supply voltage (C: 3.3 V Typ.)
⑤ Frequency / temperature characteristics (A: ±0.1 × 10⁻⁶ Max., H: ±0.25 × 10⁻⁶ Max., B: ±0.28 × 10⁻⁶ Max.)
⑥ Operating temperature (G: -40 °C to +85 °C) ⑦ OE function (N: Non)
⑧ Vc function (D: Vc = 1.5 V, E: Vc = 1.65 V, N: Non) ⑨ Internal identification code ("A" is default)

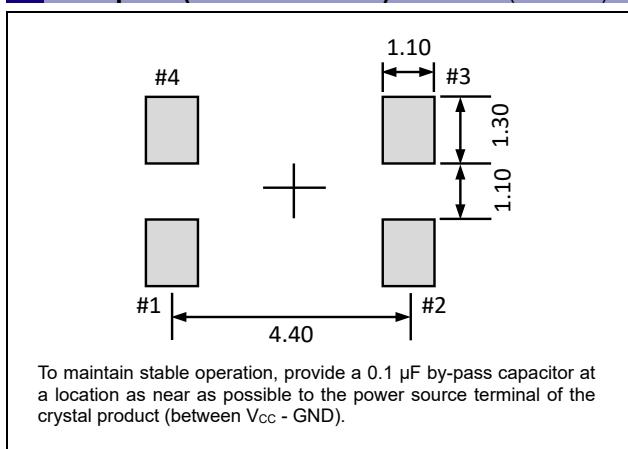
External dimensions

(Unit : mm)



Footprint (Recommended)

(Unit: mm)



► **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 general equipment.
	► Designed for automotive applications related to driving and safety.

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