

VC-TCXO / TCXO
ULTRA HIGH STABILITY



Product Number
TG5032CGN : X1G005231xxxxx
TG5032SGN : X1G005241xxxxx

TG5032CGN
TG5032SGN

- 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 (10 pins)
- Applications : Small Cells, Stratum3, SyncE, IEEE1588
- Features : Ultra high stability, Wide temperature range



Specifications (characteristics)

Item	Symbol	TG5032CGN (CMOS)		TG5032SGN(Clipped sine wave)		Conditions / Remarks
		VC-TCXO	TCXO	VC-TCXO	TCXO	
Output frequency range	f _o	10 MHz to 40 MHz				Standard frequency
		10,12.8, 19.2, 20, 24.576, 25, 25.6, 26, 30.72, 38.4, 38.88, 40 MHz				
Supply voltage	V _{cc}	C: 3.3 V ±5% (Supply voltage range :2.375 V to 3.63 V)				
Storage temperature	T _{stg}	-40 °C to +90 °C				Storage as single product
Operating temperature	T _{use}	G: -40 °C to +85 °C				
a) Frequency tolerance	f _{tol}	±1.0 × 10 ⁻⁶ Max.				After reflow, +25 °C
b) Frequency/temperature Characteristics	f _o -Tc	A: ±0.1 × 10 ⁻⁶ Max. / G: -40 °C to +85 °C H: ±0.25 × 10 ⁻⁶ Max. / G: -40 °C to +85 °C B: ±0.28 × 10 ⁻⁶ Max. / G: -40 °C to +85 °C				Reference to (fmax+fmin)/2
c) Frequency/load coefficient	f _o -Load	±0.1 × 10 ⁻⁶ Max.				Load ±10 %
d) Frequency/voltage coefficient	f _o -Vcc	±0.1 × 10 ⁻⁶ Max.				Vcc ±5%
e) Frequency aging	f _{age}	±0.5 × 10 ⁻⁶ Max.				+25 °C, First year
		±3.0 × 10 ⁻⁶ Max.				+25 °C, 20 years
Holdover stability (Constant temperature)	-	±0.01 × 10 ⁻⁶ Max. (+25 °C, 24 hours)				After 10 days of continuous operation.
Wander generation (MTIE, TDEV)	-	±0.04 × 10 ⁻⁶ Max. (+25 °C, 24 hours)				After 48 hours of continuous operation.
Free-run accuracy	-	±4.6 × 10 ⁻⁶ Max.				Compliant with GR-1244CORE, ITU-T G.8262
Current consumption	I _{cc}	5.0 mA Max. 6.0 mA Max.		5.0 mA Max.		This includes Item a),b),c),d)and e) 10 MHz ≤ f _o ≤ 26 MHz 26 MHz < f _o ≤ 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, J : Vc=1.5 V ± 1.0 V at Vcc=3.3 V E, K: Vc=1.65 V ± 1.0 V at Vcc=3.3 V
Frequency change polarity	—	Positive polarity	—	Positive polarity	—	
Symmetry	SYM	45 % to 55 %		—		50 % Vcc level, L_CMOS ≤ 15 pF
Output voltage	V _{OH}	90 % Vcc Min.		—		
	V _{OL}	10 % Vcc Max.		—		
Output level	V _{PP}	—		0.8 V Min.		Peak to Peak
Rise time / Fall time	t _r / t _f	8.0 ns Max.		—		10 % Vcc to 90 % Vcc level, Load:15 pF
Start-up time	t _{str}	5.0 ms Max.(Non-Filter: Standard) / 2.0 sec. Max.(Filter: Option)				T=0 at 90% Vcc
Output load condition	Load	15 pF		10 kΩ/10 pF		
Input voltage	V _{IH}	70% Vcc Min.				OE terminal(Enable voltage)
	V _L	30% Vcc Max.				OE terminal(Disable voltage)

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

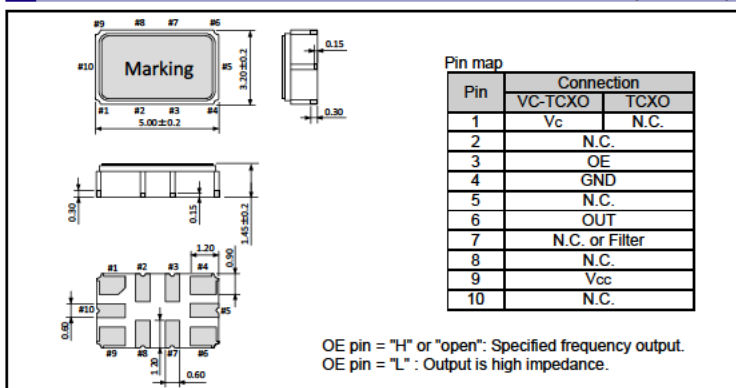
Product Name TG5032 C GN 30.720000MHz C A G H D A
(Standard form) ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- 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 (H: Active High)
- ⑧ Vc function (Refer to symbol table) ⑨ Internal identification code ("A" is default)

⑧Vc function (symbol table)				
Vc [V]	Non	1.5	1.65	Any
Non Filter	N	D	E	A
Filter ON	G	J	K	F

External dimensions

(Unit :mm)



Footprint (Recommended)

(Unit :mm)

