



# TCXO HIGH STABILITY 105 °C HIGH TEMPERATURE



Product Number  
**TG-5510CA: X1G006001xxxx99**  
**TG-5511CA: X1G006011xxxx99**

## TG-5510CA / TG-5511CA

- Frequency range : 10 MHz to 54 MHz
- Supply voltage : 3.3 V Typ.
- Frequency / temperature characteristics :  $\pm 0.28 \times 10^{-6}$  Max. (-40 °C to +85 °C, 105 °C option)
- Free-run accuracy :  $\pm 4.6 \times 10^{-6}$  Max. / 20 years (for Stratum3)
- External dimensions : 7.0 × 5.0 × 1.5 mm (10 pins or 4 pins)
- Applications : Network synchronization, Stratum3, BTS, SyncE, IEEE1588, Microwave, BTS
- Features : 105 °C High temp, High stability



TG-5510CA  
(10 pins)



TG-5511CA  
(4 pins)

### Specifications (characteristics)

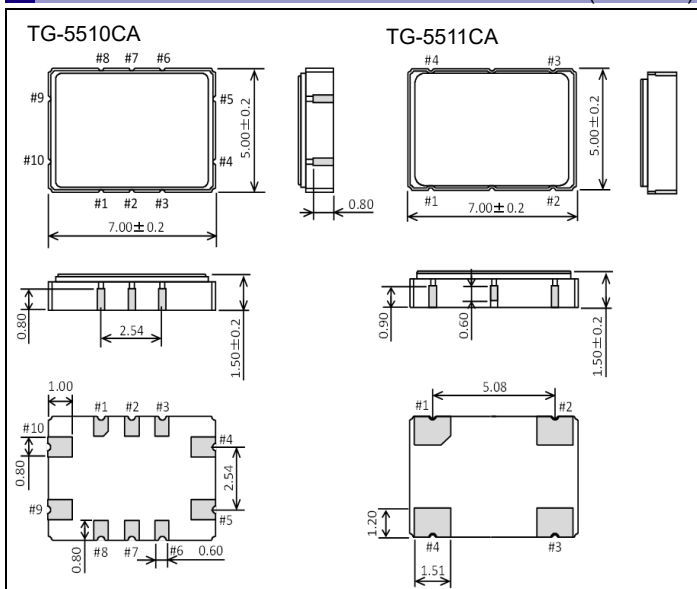
Item	Symbol	CMOS	Clipped sine wave	Condition
Output frequency range	fo	10 MHz to 54 MHz		Please contact us about available frequencies.
Supply voltage	V <sub>CC</sub>	3.3 V ± 5 %		
Storage temperature range	T <sub>stg</sub>	-40 °C to +105 °C		Storage as single product.
Operating temperature range	T <sub>use</sub>	-40 °C to +85 °C (-40 °C to +105 °C)		Standard (Option)
a) Frequency tolerance	f <sub>tol</sub>	±1.0 × 10 <sup>-6</sup> Max.		After reflow, +25 °C
b) Frequency/temperature characteristics	fo-Tc	±0.28 × 10 <sup>-6</sup> Max. (±0.25 × 10 <sup>-6</sup> Max.)		Standard (Option)
c) Frequency/load coefficient	fo-Load	±0.1 × 10 <sup>-6</sup> Max.		Load ± 10 %
d) Frequency/voltage coefficient	fo-V <sub>CC</sub>	±0.1 × 10 <sup>-6</sup> Max.		V <sub>CC</sub> ± 5 %
e) Frequency aging	f <sub>age</sub>	±0.5 × 10 <sup>-6</sup> Max.		+25 °C, First year
		±3.0 × 10 <sup>-6</sup> Max.		+25 °C, 20 years
Holdover stability (Constant temperature)	-	±0.01 × 10 <sup>-6</sup> Max. (+25 °C, 24 hours)		After 10 days of continuous operation
Wander generation (MTIE, TDEV)	-	±0.04 × 10 <sup>-6</sup> Max. (+25 °C, 24 hours)		After 48 hours of continuous operation
Wander generation (MTIE, TDEV)	-	Compliant with GR-1244CORE, ITU-T G.8262		
Free-run accuracy	-	±4.6 × 10 <sup>-6</sup> Max. / 20 years		This includes Item a), b), c), d) and e)
Current consumption	I <sub>CC</sub>	7.0 mA Max.		10 MHz ≤ fo ≤ 26 MHz
		9.0 mA Max.		26 MHz < fo ≤ 40 MHz
		10.0 mA Max.		40 MHz < fo ≤ 54 MHz
Symmetry	SYM	45 % to 55 %		GND level (DC cut)
Output voltage	V <sub>OH</sub>	90 % V <sub>CC</sub> Min.		
	V <sub>OL</sub>	10 % V <sub>CC</sub> Max.		
Rise time / Fall time	tr/tf	8.0 ns Max.		10 % V <sub>CC</sub> to 90 % V <sub>CC</sub> level, Load: 15 pF
Start-up time	t <sub>str</sub>	5 ms. Max.		t = 0 at 90 % V <sub>CC</sub>
Output level	V <sub>pp</sub>	0.8 V Min.		Peak to Peak
Output load condition	Load	15 pF		10 kΩ // 10 pF
Input voltage	V <sub>IH</sub>	70 % V <sub>CC</sub> Min.		OE terminal (Enable voltage)
	V <sub>IL</sub>	30 % V <sub>CC</sub> Max.		OE terminal (Disable voltage)

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

Product Name TG-5510CA-\*\*\* 30.720000MHz  
 (Standard form) ① ② ③ ④  
 ①Model ②Package type ③Spec segment (Please contact us) ④Frequency

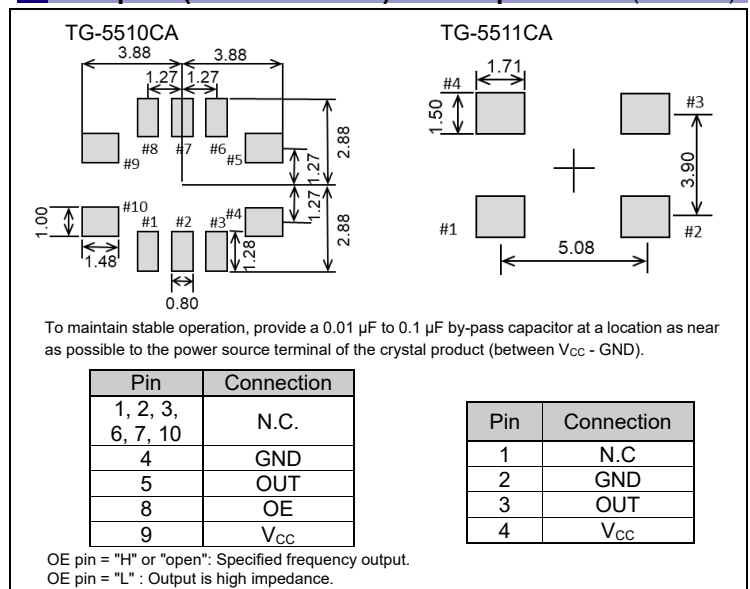
### External dimensions

(Unit : mm)



### Footprint (Recommended) / Pin Map

(Unit : mm)



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

	<p>► Pb free.</p>
	<p>► 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.)</p>
	<p>► Designed for automotive general equipment.</p>
	<p>► Designed for automotive applications related to driving and safety.</p>

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