



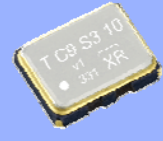
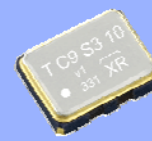
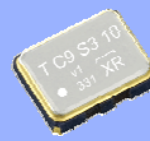
## TCXO MINIATURE SIZE LOW PROFILE

# TG - 5021CE

- Frequency range : 10 MHz to 40 MHz
- Supply voltage : 2.8 V Typ.
- Frequency / temperature characteristics:  $\pm 2.0 \times 10^{-6}$  Max.
- External dimensions : 3.2 x 2.5 x 0.9 mm
- Applications : Cellular phone(CDMA , WCDMA , LTE)
- Features : Low phase noise



Product Number (Please contact us)  
X1G003821xxxx00



Actual size



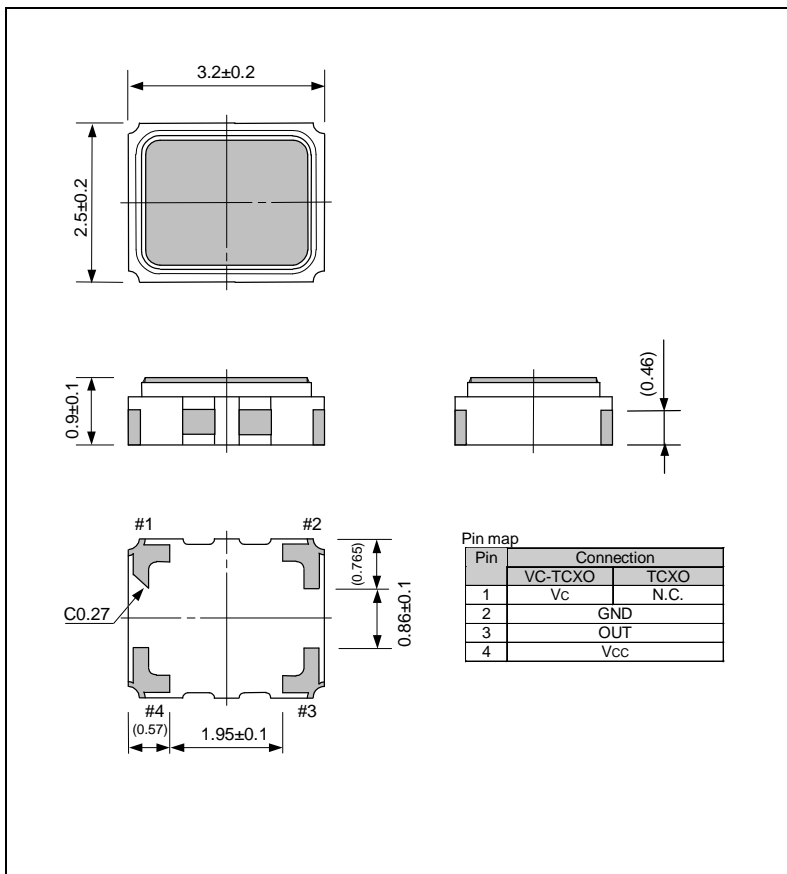
### Specifications (characteristics)

Item	Symbol	Specifications		Conditions / Remarks
		VC-TCXO	TCXO	
Output frequency range	$f_0$	10.000 MHz to 40.000 MHz		Standard frequency
		13 MHz, 19.2 MHz, 26 MHz		
Supply voltage	Vcc	2.8 V $\pm$ 0.14 V(Supply voltage range : 2.3 V to 3.6 V)		
Storage temperature	T_stg	-40 °C to +85 °C		Storage as single product.
Operating temperature	T_use	-30 °C to +85 °C		
Frequency tolerance	f_tol	$\pm 2.0 \times 10^{-6}$ Max.		After reflow, +25 °C
Frequency / temperature characteristics	fo-Tc	$\pm 2.0 \times 10^{-6}$ Max.		-30 °C to +85 °C
Frequency / load coefficient	fo-Load	$\pm 0.2 \times 10^{-6}$ Max.		10 k $\Omega$ // 10 pF $\pm$ 10 %
Frequency / voltage coefficient	fo-Vcc	$\pm 0.2 \times 10^{-6}$ Max.		2.8 V $\pm$ 0.14 V
Frequency aging	f_age	$\pm 1.0 \times 10^{-6}$ Max.		+25 °C, First year
Current consumption	Icc	2.0 mA Max.		Vcc=2.8 V, 10 k $\Omega$ / 10 pF
Input resistance	Rin	500 k $\Omega$ Min.	—	Vc- GND (DC)
Frequency control range	f_cont	$\pm 5.0 \times 10^{-6}$ to $\pm 12.0 \times 10^{-6}$		Vc=1.4 V $\pm$ 1.0 V
Frequency change polarity	—	Positive polarity	—	
Symmetry	SYM	40 % to 60 %		GND level (DC cut)
Output voltage	Vpp	0.8 V Min.		Peak to Peak
Load resistance	Load_R	10 k $\Omega$		
Load capacitance	Load_C	10 pF		DC cut capacitor = 0.01 $\mu$ F

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

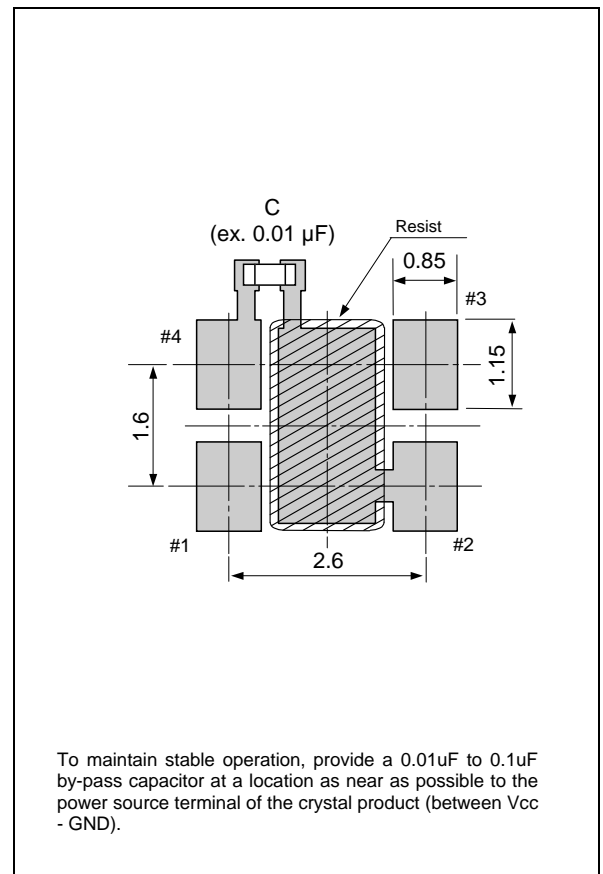
### External dimensions

(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

In order provide high quality and reliable products and services than meet customer needs,

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.

ISO/TS16949 is the international standard that added the sector-specific supplemental requirements for automotive industry based on ISO9001.

### ► 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>► The products have been designed for high reliability applications such as Automotive.</p>

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