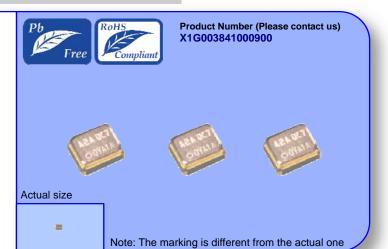
SEIKO EPSON CORPORATION

TCXO ULTRA MINIATU HIGH STABILIT TG - 503	_
 Frequency range Supply voltage Frequency / temperative 	: 1.8 V, 2.85 V Typ. ture characteristics
•External dimensions •Applications	 ±0.5 × 10⁻⁶ Max. 2.0 × 1.6 × 0.73 mm Cellular phone (GPS) High stability Low supply voltage (1.8 V)

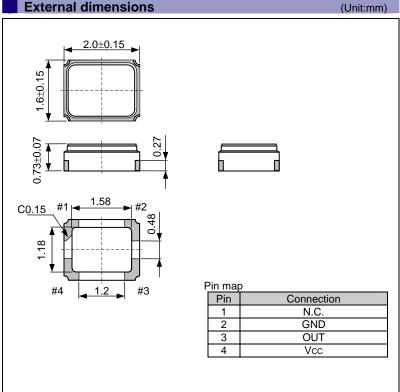


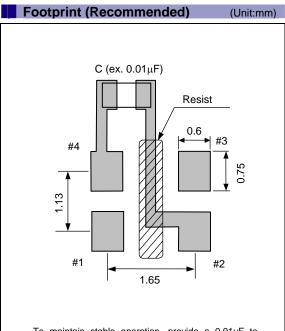
Specifications (characteristics)

Item	Symbol	Specifications	Conditions / Remarks
Output frequency range	fo	19.2 MHz	
Supply voltage	Vcc	1.8 V \pm 0.1 V, 2.85 V \pm 5 %	
Storage temperature	T_stg	-40 ℃ to +85 ℃	Store as bare 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	$\pm 0.5 \times 10^{-6}$ Max.	-30 °C to +85 °C
Frequency/load coefficient	fo-Load	$\pm 0.2 \times 10^{-6}$ Max.	10 kΩ // 10 pF ±10 %
Frequency/voltage coefficient	fo-Vcc	$\pm 0.2 \times 10^{-6}$ Max.	1.8 V \pm 0.1 V, 2.85 V \pm 5 %
Frequency aging	f_age	±0.7 × 10 ⁻⁶ Max.	+25 °C, First year
Current consumption	Icc	1.5 mA Max.	Vcc=2.85 V, 10 kΩ// 10 pF
Symmetry	SYM	40 % to 60 %	GND level (DC cut)
Output voltage	Vpp	0.8 V Min.	peak to peak
Output load condition	Load_R	10 kΩ	DC cut capacitor = 0.01 μF
	Load_C	10 pF	

* Note : Please contact us for inquiries about specifications other than the above.

External dimensions





To maintain stable operation, provide a 0.01μ F to 0.1μ F by-pass capacitor at a location as near as possible to the power source terminal of the crystal product (between Vcc - GND). The above connection is one exapmle.

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.

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.

Explanation of the mark that are using it for the catalog

Standards Organization in 1996 against the background of growing concern regarding global warming, destruction of the ozone layer, and global deforestation.

ISO 14000 is an international standard for environmental

management that was established by the International

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

	Pb Free	► Pb free.
	Rolls	► Complies with EU RoHS directive.
Compliant	*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.)
	For Automotive	► The products have been designed for high reliability applications such as Automotive.

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