

TCXO/VC-TCXO
HIGH STABILITY**NEW**Product Number (Please contact us)
X1G004691xxxx00**TG2016SBN**

- Output frequency : 13 MHz to 52MHz
- Supply voltage : 1.8 V Typ./ 2.8 V Typ./ 3.0 V Typ./ 3.3 V Typ.
- Frequency / temperature characteristics : $\pm 0.5 \times 10^{-6}$ Max. or $\pm 2.0 \times 10^{-6}$ Max.
- External dimensions: 2.0 × 1.6 × 0.73 mm
- Applications : GPS, RF
Wireless communication devices
(CDMA, WCDMA, LTE, WiMAX, other)
- Features : Wide supply voltage (1.7 to 3.63V)
Low noise



Actual size

**Specifications (characteristics)**

Item	Symbol	VC-TCXO	TCXO	Conditions / Remarks
Output frequency range	fo	13 MHz to 52MHz		Standard frequency
		13 MHz, 16.367667 MHz, 16.368 MHz, 16.369 MHz, 16.8 MHz, 19.2 MHz, 26 MHz, 27MHz, 30 MHz, 32 MHz, 33.6MHz, 38.4 MHz, 40 MHz and 52 MHz		
Supply voltage	Vcc	1.8 V ±0.1 V / 2.8 V ±5 % / 3.0 V ±5 % / 3.3 V ±5 %		Supply voltage range :1.7 V to 3.63 V
Storage temperature	T_stg	-40 °C to +90 °C		Storage as single product.
Operating temperature	T_use	-40 °C to +85 °C		
Frequency tolerance	f_tol	±2.0 × 10 ⁻⁶ Max.		After reflow, +25 °C
Frequency/temperature characteristics	fo-Tc	±0.5 × 10 ⁻⁶ Max. / -30 °C to +85 °C		High stability version (for GPS)
		±2.0 × 10 ⁻⁶ Max. / -30 °C to +85 °C		Standard stability version (for RF)
		±0.5 × 10 ⁻⁶ Max. / -40 °C to +85 °C (Option)		Customized product
Frequency/load coefficient	fo-Load	±0.2 × 10 ⁻⁶ Max.		10 kΩ // 10 pF ±10 %
Frequency/voltage coefficient	fo-Vcc	±0.2 × 10 ⁻⁶ Max.		Vcc ± 5 %
Frequency aging	f_age	±1.0 × 10 ⁻⁶ Max.		+25 °C, First year, 13 MHz≤ fo ≤40 MHz
		±1.5 × 10 ⁻⁶ Max.		+25 °C ,First year, 40 MHz< fo ≤52 MHz
Current consumption	Icc	1.5 mA Max.		13 MHz≤ fo ≤26 MHz
		2.0 mA Max		26MHz<fo
Input resistance	Rin	500 kΩ Min.	-	Vc - GND (DC)
Frequency control range	f_cont	±8.0 × 10 ⁻⁶ to ±15.0 × 10 ⁻⁶	-	Vc =0.9 V ±0.6 V (Vcc =1.8 V) or Vc =1.4 V ±1.0 V (Vcc =2.8 V) or Vc =1.5 V ±1.0 V (Vcc =3.0 V) or Vc =1.65 V ±1.0 V (Vcc =3.3 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
Output load condition	Load_R	10 kΩ		DC cut capacitor = 0.01 μF
	Load_C	10 pF		

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

Product Name
(Standard form)

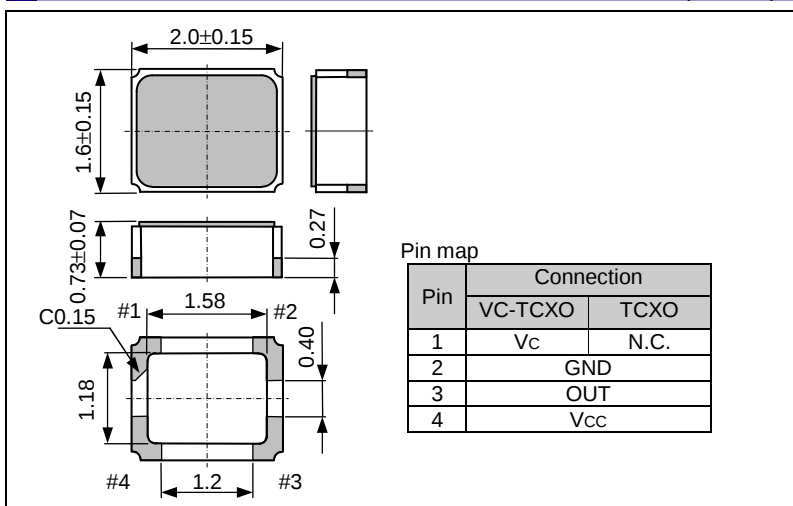
TG2016 SBN 26.000000MHz T C N N N A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

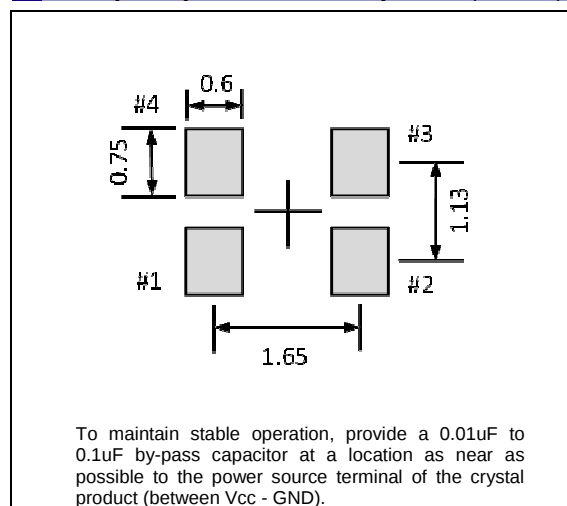
- ① Model ② Output (S: Clipped sine wave) ③ Frequency ④ Supply voltage (T: 1.8 to 3.3 V)
 ⑤ Frequency / temperature characteristics (C: $\pm 0.5 \times 10^{-6}$ Max.) ⑥ Operating temperature (N: -30 °C to +85 °C)
 ⑦ OE function (N: Non) ⑧ V_c function (N: Non) ⑨ Internal identification code ("A" is default)

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

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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

	► 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 applications such as Car Multimedia, Body Electronics, Remote Keyless Entry etc.
	► Designed for automotive applications related to driving safety (Engine Control Unit, Air Bag, ESC etc).

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