


**VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO)**  
**OUTPUT : CMOS**

**Product Number**  
**VG2520CAN: X1G004401xxxxxx**  
**VG7050CAN: X1G004531xxxxxx**

# VG2520CAN

# VG7050CAN

- Frequency range : 30.72 MHz
- Supply voltage : 3.3 V
- Absolute pull range :  $\pm 50 \times 10^{-6}$  Min.
- Operation temperature : -40 °C to +85 °C / -40 °C to +105 °C
- Output : CMOS


**Specifications (characteristics)**

Item	Symbol	Specifications	Conditions / Remarks
Output frequency range	$f_o$	30.72 MHz	Please contact us about available frequencies. (1.25 MHz to 80 MHz)
Supply voltage	V <sub>cc</sub>	3.3 V $\pm 0.165$ V	
Storage temperature range	T <sub>stg</sub>	-40 °C to +125 °C	Storage as single product
Operating temperature range	T <sub>use</sub>	G: -40 °C to +85 °C, H: -40 °C to +105 °C	
Current consumption	I <sub>cc</sub>	15 mA Max.	CL=15pF
Frequency tolerance *1	f <sub>tol</sub>	$\pm 50 \times 10^{-6}$ Max.	
Frequency control range	F <sub>cont</sub>	$\pm 100 \times 10^{-6}$ Min.	V <sub>c</sub> = 1.65 V $\pm 1.65$ V
Absolute pull range *2	APR	$\pm 50 \times 10^{-6}$ Min.	V <sub>c</sub> = 1.65 V $\pm 1.65$ V
Modulation band width	BW	10 kHz Min.	$\pm 3$ dB (refer to response at 1kHz)
Input resistance	R <sub>in</sub>	10 M $\Omega$ Min.	DC level
Frequency change polarity	—	Positive	V <sub>c</sub> = 1.65 V $\pm 1.65$ V
Symmetry	SYM	45 % to 55 %	50 % V <sub>cc</sub> level
Output voltage	V <sub>OH</sub>	90 % V <sub>cc</sub> Min.	
	V <sub>OL</sub>	10 % V <sub>cc</sub> Max.	
Output load condition	L <sub>CMOS</sub>	15 pF Max.	CMOS
Rise/Fall times	t <sub>r</sub> / t <sub>f</sub>	5 ns Max.	at 20 % to 80 % V <sub>cc</sub> level
Start-up time	t <sub>str</sub>	10ms Max.	t=0 at 90 % V <sub>cc</sub>

\*1 Frequency tolerance includes initial frequency tolerance, temperature variation, supply voltage variation, reflow drift, and aging (+25 °C, 10 years).

\*2 Absolute pull range = Frequency control range - Frequency tolerance

Please keep V<sub>c</sub> pin open or ground while powering up V<sub>cc</sub>.

Product name VG2520 CAN 30.720000 MHz C J G N B B  
 (Standard form) ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Model ② Output (C: CMOS) ③ Frequency

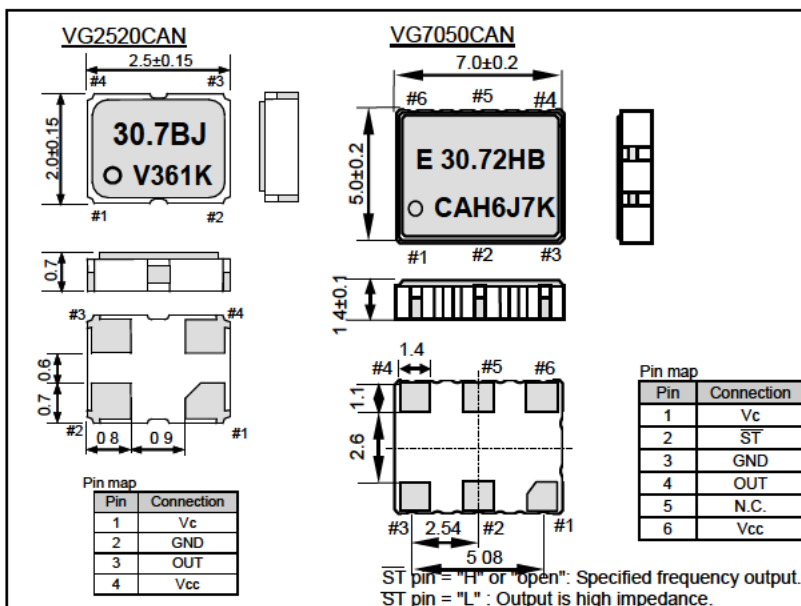
④ Supply voltage (C: 3.3 V Typ.) ⑤ Frequency tolerance (J:  $\pm 50 \times 10^{-6}$  Max.)

⑥ Operating temperature (G: -40 to +85°C, H: -40 to +105°C) ⑦ OE Function (N: Non, S: Standby)

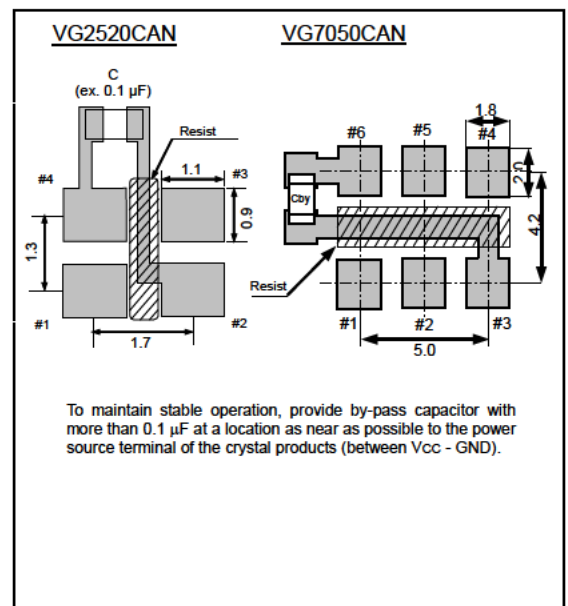
⑧ Absolute Pull Range (B:  $\pm 50 \times 10^{-6}$  Min.) ⑨ Internal identification code

**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 IATF 16949 certification that is requested strongly by major automotive manufacturers as standard.

IATF 16949 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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