VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO)
OUTPUT : CMOS

Pb Free RoHS Compliant

Product Number
VG2520CAN: X1G004401xxxxxx
VG7050CAN: X1G004531xxxxxx

VG2520CAN
VG7050CAN

VG2520CAN
(2.5 × 2.0 × 0.7 mm)

VG7050CAN
(7.0 × 5.0 × 1.4 mm)

- Frequency range : 30.72 MHz
- Supply voltage : 3.3 V
- Absolute pull range : ±50×10⁻⁶ 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	fo	30.72 MHz	Please contact us about available frequencies. (1.25 MHz to 80 MHz)
Supply voltage	Vcc	3.3 V ±0.165 V	
Storage temperature range	T_stg	-40 C to +125 C	Storage as single product
Operating temperature range	T_use	G: -40 C to +85 C, H: -40 C to +105 C	
Current consumption	Icc	15 mA Max.	CL=15pF
Frequency tolerance *1	f_tol	±50 × 10⁻⁶ Max.	
Frequency control range	F_cont	±100 × 10⁻⁶ Min.	Vc= 1.65 V ±1.65 V
Absolute pull range *2	APR	±50×10⁻⁶ Min.	Vc= 1.65 V ±1.65 V
Modulation band width	BW	10 kHz Min.	±3 dB (refer to response at 1kHz)
Input resistance	Rin	10 MΩ Min.	DC level
Frequency change polarity	—	Positive	Vc= 1.65 V ±1.65 V
Symmetry	SYM	45 % to 55 %	50 % Vcc level
Output voltage	VOH	90 % Vcc Min.	
	VOL	10 % Vcc Max.	
Output load condition	L_CMOS	15 pF Max.	CMOS
Rise/Fall times	tr / tf	5 ns Max.	at 20 % to 80 % Vcc level
Start-up time	t_str	10ms Max.	t=0 at 90 % Vcc

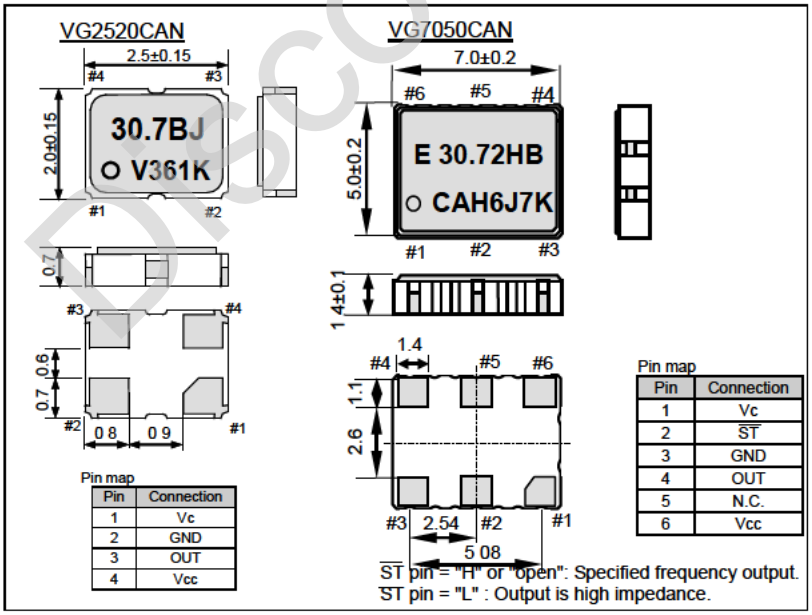
*1 Frequency tolerance includes initial frequency tolerance, temperature variation, supply voltage variation, reflow drift, and aging (+25 C, 10 years).
*2 Absolute pull range = Frequency control range - Frequency tolerance
Please keep Vc pin open or ground while powering up Vcc.

Product name (Standard form)

VG2520 CAN	30.720000 MHz	C	J	G	N	B	B
①	②	③	④	⑤	⑥	⑦	⑧	⑨

①Model ②Output (C: CMOS) ③Frequency
④Supply voltage (C: 3.3 V Typ.) ⑤Frequency tolerance (J: ±50 × 10⁻⁶ Max.)
⑥Operating temperature (G: -40 to +85°C, H: -40 to +105°C) ⑦OE Function (N: Non, S: Standby)
⑧Absolute Pull Range (B: ±50 × 10⁻⁶ Min.) ⑨Internal identification code

External dimensions (Unit :mm)



Pin map

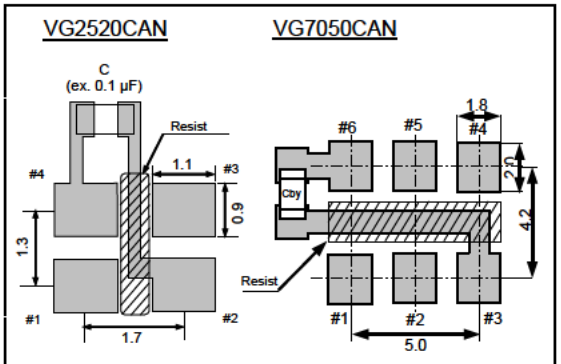
Pin	Connection
1	Vc
2	GND
3	OUT
4	Vcc

Pin map

Pin	Connection
1	Vc
2	$\overline{ST}$
3	GND
4	OUT
5	N.C.
6	Vcc

$\overline{ST}$ pin = "H" or "open": Specified frequency output.
$\overline{ST}$ pin = "L" : Output is high impedance.

Footprint (Recommended) (Unit :mm)



To maintain stable operation, provide by-pass capacitor with more than 0.1 µF at a location as near as possible to the power source terminal of the crystal products (between Vcc - GND).

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