

VOLTAGE -CONTROLLED CRYSTAL OSCILLATOR (VCXO)



Product Number  
X1G004861xxxx00

# VG7050CDN

- Frequency range : 85 MHz to 170 MHz
- Supply voltage : 3.3 V
- Absolute pull range :  $\pm 50 \times 10^{-6}$  min.
- External dimensions : 7.0 × 5.0 × 1.5 mm (t: Typ.)
- Operation temperature : +85 °C / +105 °C
- Function : Output enable(OE)
- Output : CMOS



## Specifications (characteristics)

Item	Symbol	Specifications	Remarks
Output frequency range	fo	85 MHz to 170 MHz	Please contact us for inquiries regarding available frequencies.
Supply voltage	Vcc	3.3 V ± 0.165 V	
Storage temperature range	T_stg	-55 °C to +125 °C	Store as bare product after unpacking
Operating temperature range	T_use	G: -40 °C to +85 °C, H: -40 °C to +105 °C	
Frequency tolerance	f_tol	$\pm 50 \times 10^{-6}$ Max.	Includes initial tolerance, temperature change, Vcc change and 10 years aging at +25 °C. At Vc = 1.65 V, reference to fo
Current consumption	Icc	30 mA Max.	L_CMOS = 15 pF
Absolute pull range*1	APR	$\pm 50 \times 10^{-6}$ Min.	Vc = 1.65 V ± 1.65 V
Input resistance	Rin	10 MΩ Min.	DC level
Frequency change polarity	—	Positive slope	Vc = 0 V to 3.3 V
Symmetry	SYM	45 % to 55 %	50 % Vcc level
High output voltage	VOH	90 % Vcc Min.	
Low output voltage	VoL	10 % Vcc Max.	
Output load condition (CMOS)	L_CMOS	15 pF Max.	
Output enable / disable input voltage	VIH	70 % Vcc Min.	VIH or OPEN : Enable
	VIL	30 % Vcc Max.	VIL or GND : Disable
Rise time / Fall time	tr / tf	2 ns Max.	20 % Vcc to 80 % Vcc level
Start-up time	t_str	10 ms Max.	Time at minimum supply voltage to be 0 s

\*1 Absolute pull range = Frequency control range - Frequency tolerance

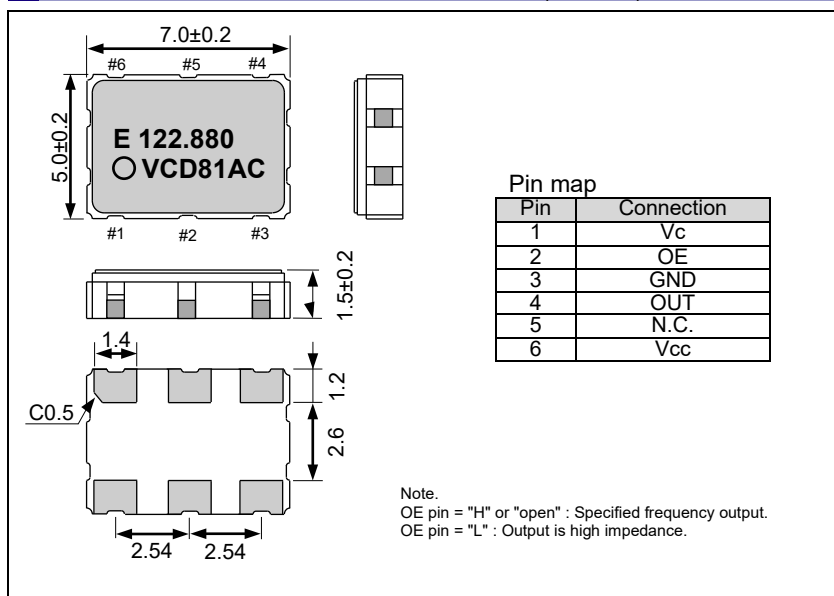
\* Please keep Vc pin open or ground while powering up Vcc.

Product name VG7050 CDN 122.880000 MHz C J G H B A  
(Standard form) ① ② ③ ④⑤⑥⑦⑧⑨

- ①Model ②Output (C: CMOS) ③Frequency ④Supply voltage (C: 3.3 V Typ)
- ⑤Frequency tolerance (J:  $\pm 50 \times 10^{-6}$  Max.) ⑥Operating temperature (G: -40 °C to +85 °C, H: -40 °C to +105 °C)
- ⑦OE Function (H: Active High) ⑧Absolute Pull Range (B:  $\pm 50 \times 10^{-6}$  Min.) ⑨Output Standby Type (A: High-Z)

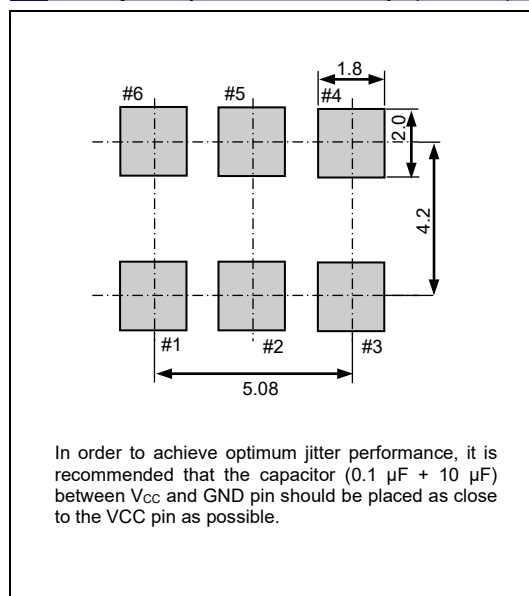
## External dimensions

(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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