VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO)

OUTPUT : LVDS

NEW

VG3225 / 5032VFN

- Frequency range : 100 MHz to 250 MHz
- Supply voltage : 3.3 V
- Absolute pill range : 20 x10^{-6} min / 50 x 10^{-6} min
- Operating temperature: -40 °C to +85 °C
  : -40 °C to +105 °C (Option)
- Function : Output enable (OE)
- Output : LVDS

Pb Free

RoHS Compliant

Product Number (please contact us)
VG3225VFN X1G005461xxxx00
VG5032VFN X1G005481xxxx00


Actual size

VG3225VFN

VG5032VFN

Specifications (characteristics)

Item	Symbol	Specifications	Conditions / Remarks
Output frequency range	f0	100 MHz to 250 MHz	Please contact us for inquiries regarding available frequencies.
Supply voltage	VCC	3.3 V ±0.165 V	
Control voltage*	VC	1.65 V ±1.65 V	
Storage temperature	T_stg	-55 °C to +125 °C	Store as bare product.
Operating temperature	T_use	G : -40 °C to +85 °C , H : -40 °C to +105 °C	
Frequency tolerance	f_tol	±50 × 10^{-6} Max.	Includes initial tolerance, temperature change, Vcc change and 10 years aging at +25 °C. At Vc=1.65V, reference to f0
Absolute Pull range *1	APR	±50 × 10^{-6} Min	100 MHz ～ 170 MHz
		±20 × 10^{-6} Min	100 MHz ～ 250 MHz
Current consumption	ICC	25 mA Max.	OE= VCC, with output load
Input resistance	Rin	10 MΩ Min.	DC level
Frequency change polarity	-	Positive slope	VC= 0 to 3.3 V
Symmetry	SYM	45 % to 55 %	at outputs crossing point
Output voltage	VOD	250 mV to 450mV	VOD1, VOD2 — DC characteristics
	VOS	1.15 V to 1.35 V	VOS1, VOS2 — DC characteristics
Output load condition	L_LVDS	100 Ω	Connected between OUT to $\overline{OUT}$
Input voltage	VIH	70 % VCC Min.	OE terminal
	VIL	30 % VCC Max.	OE terminal
Rise/Fall times	Tr / Tf	0.3 ns Max.	at 20 % and 80 %of Differential Output peek to peek voltage
Oscillation start up time	t_str	10 ms Max.	Time at minimum supply voltage to be 0 s
Phase Jitter	tPJ	160 fs Max.(122.88 MHz) 80 fs Max.(245.76 MHz)	Offset Frequency 12kHz to 20MHz

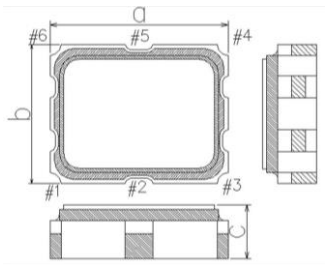
*1 Absolute pull range = Frequency control range- Frequency tolerance
* Please keep Vc pin open or ground while powering up Vcc.

Product name (Standard form)

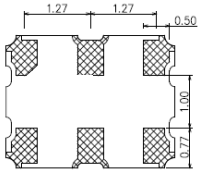
VG3225 VFN 122.880000 MHz C J G H B A
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

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

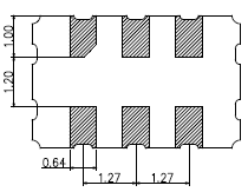
External dimensions (Unit:mm)



3225 size



5032 size



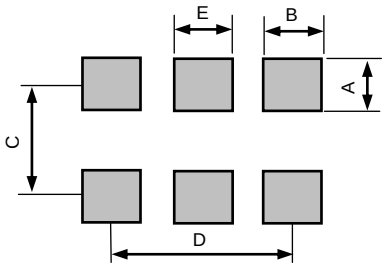
	3225 size	5032 size
a	3.2	5.0
b	2.5	3.2
c	1.05	1.3

Pin map

Pin	Connection
1	VC
2	OE
3	GND
4	OUT
5	$\overline{OUT}$
6	Vcc

Note:
OE pin = HIGH or “Open” : Specified frequency output.
OE pin = LOW : Output is high impedance

Footprint (Recommended) (Unit:mm)



	3225 size	5032 size
A	1.05	1.60
B	0.92	0.89
C	1.85	2.60
D	2.54	2.54
E	0.80	0.89

In order to achieve optimum jitter performance, it is recommended that the capacitor (0.1 µF + 10 µF) between VCC and GND pin should be placed as close to the VCC pin as possible.

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 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	►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).

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