## SEIKO EPSON CORPORATION



## Specifications (characteristics)

Item	Symbol	Specifications	Conditions / Remarks
Output frequency range	fO	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 <sup>-6</sup> 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 <sup>-6</sup> Min	100 MHz ~ 170 MHz
		±20 × 10 <sup>-6</sup> Min	100 MHz ~ 250 MHz
Current consumption	ICC	60 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	VOH VOL	Vcc-1.1 V Min. Vcc-1.5 V Max.	DC characteristics
Output load condition	L_ECL	50 Ω	Terminated to VCC-2.0V
Input voltage	VIH	70 % VCC Min.	OE terminal
	VIL	30 % VCC Max.	
Rise/Fall times	Tr / Tf	0.3 ns Max.	20 % ~ 80 % (VOH – VOL)
Oscillation start up time	t_str	10 ms Max.	Time at minimum supply voltage to be 0 s
Phase Jitter	tPJ	120 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)

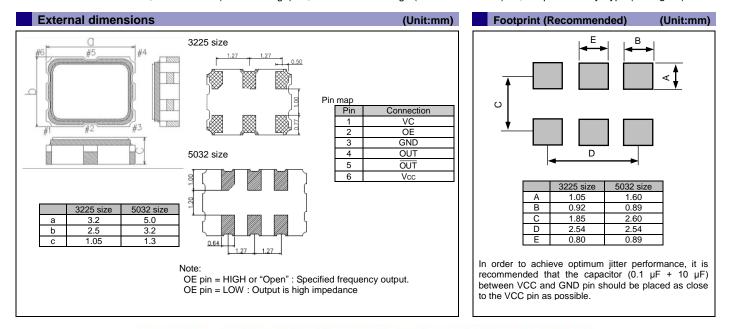
VG3225 EFN 122.880000 MHz C J G H B A

 ①
 ②
 ③
 ④
 ⑤
 ⑦
 ⑧
 ⑨

 ① Model
 ②Output (E: LV-PECL)
 ③Frequency
 ④Supply voltage (C: 3.3 V Typ)

(a) Frequency tolerance (J:  $\pm 50 \times 10^{-6}$  Max.) (a) Operating temperature (G: -40 to  $+85^{\circ}$ C)

⑦OE Function (H: Active High) ⑧Absolute Pull Range (B: ±50 × 10<sup>-6</sup> Min.) ⑨Output Standby Type (A: High-Z)



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## 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.

**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.

Explanation of the mark that are using it for the catalog

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.

ISO/TS16949 is the international standard that added the sector-specific supplemental requirements for automotive industry based on ISO9001.

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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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