

VOLTAGE -CONTROLLED CRYSTAL OSCILLATOR (VCXO) OUTPUT: LV-PECL

VG-4512CA

: 80 MHz to 200 MHz •Frequency range

 Supply voltage : 3.3 V

: 50×10^{-6} , 100×10^{-6} •Absolute pull range •External dimensions : 7.0 x 5.0 x 1.6 mm Function Output enable (OE) Active High or Low

Output : LV-PECL



Specifications (characteristics)

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Item	Symbol	Specifications	Conditions / Remarks
Output frequency range	fo	80.000 MHz to 200.000 MHz	Please contact us about available frequencies.
Supply voltage	Vcc	3.3 V ±0.165 V	
Storage temperature	T_stg	-55 °C to +125 °C	Storage as single product.
Operating temperature	T_use	G: -40 to +85°C, J: -20 to +70°C, K: 0 to +70°C	
Frequency tolerance	f_tol	±50 × 10 ⁻⁶ Max.	Includes frequency aging (20 years)
Current consumption	Icc	60 mA Max.	50Ω
Absolute pull range *1	APR	H: $\pm 100 \times 10^{-6}$ Min., G: $\pm 50 \times 10^{-6}$ Min.	Vc= 1.65 V ± 1.50 V
Input resistance	Rin	100 kΩ Min.	DC level
Frequency change polarity	_	Positive slope	Vc= 0.15 to 3.15 V
Symmetry	SYM	45 % to 55 %	Vcc= 1.3V, Vc= 1/2Vcc
Output voltage	Vон	Vcc-1.1 V Min.	
Output voltage	Vol	Vcc-1.5 V Max.	
Output load condition (ECL)	L_ECL	50Ω	Terminated to Vcc-2.0V
Input valtage	ViH	70 % Vcc Min.	
Input voltage	VIL	30 % Vcc Max.	
Rise time / Fall time	tr / tf	1.0 ns Max.	between 20% and 80% of (V _{OH} -V _{OL})
Start-up time	t_str	10 ms Max.	Time at minimum supply voltage to be 0 s
Frequency aging	f_aging	This is included frequency tolerance	+25 °C, Vcc=3.3 V, 20 years

^{*1} Absolute pull range = Frequency control range - Frequency tolerance

Product Name (Standard form) <u>VG-4512 CA</u> - <u>155.520000</u> - <u>G</u> <u>G</u> <u>C</u> <u>T</u> 1 3 4567

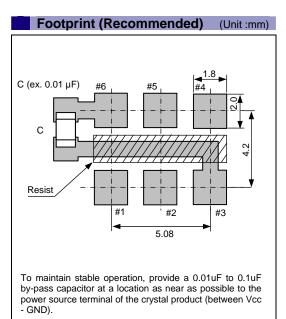
②Package type ③Frequency(MHz) ④Operating temperature ⑤Absolute pull range ①Model ⑤Supply voltage (C: 3.3V Typ.) ⑦OE function

40			
G	-40 to +85°C		
J	-20 to +70°C		
K	0 to +70°C		

⑤Absolute pull range		
Н	±100 × 10 ⁻⁶ Min.	
G	±50 × 10 ⁻⁶ Min.	

OE function		
Т	Active High	
L	Active Low	

External dimensions (Unit:mm) 7.0±0.2 #6 #5 5.0 ± 0.2 155.520 O VAG2Z3C Pin map Pin Connection #3 #2 Vc OF 3 GND OUT1(Positive) 4 OUT2(Negative) Vcc C0.5 9 ● Active High OE pin = "H" or "open" : Specified frequency output. OE pin = "L" : Output is high impedance, oscillation stops. Active Low OE pin = "L" or "open" : Specified frequency output. 2.54 2.54 OE pin = "H": Output is high impedance, oscillation stops



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

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.



- ► 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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