

Specifications (characteristics)

		,			1				
Item	Symbol	Specifications				Conditions / Remarks			
Output frequency range	fo	100.000 MHz to 250.000 MHz			Please	ease contact us about available frequencies.			
Supply voltage Vcc		3.3 V ± 0.165 V							
Storage temperature range T_stg		-55 °C to +125 °C							
Operating temperature rai	nge T_use	-40 °C to +85 °C							
Current consumption	Icc	65 mA Max.							
Frequency tolerance	f_tol	100 MHz ≤ f₀ ≤ 200 MHz : ±50 × 10 ^{.6} Max. 200 MHz < f₀ ≤ 250 MHz : ±70 × 10 ^{.6} Max.			Includes initial tolerance, temperature change, Vcc change and 10years aging				
Absolute pull range API		120 MHz ≤ f_0 ≤ 200 MHz ±30 × 10 ⁻⁶ Min. ±50 × 10 ⁻⁶ Min. ±100 × 10 ⁻⁶ Min. 100 MHz ≤ f_0 < 120 MHz, 200 MHz < f_0 ≤ 250 MHz ±30 × 10 ⁻⁶ Min. ±50 × 10 ⁻⁶ Min.			Vc= 1.65 V ±1.65 V				
Input resistance	Rin	100 kΩ Min.			DC leve	el			
Output load condition L_EC		50Ω at Vcc -2.0V							
High output voltage	Voн	Vcc-1.1 V Min.							
Low output voltage	Vol	Vcc-1.5 V Max.							
Symmetry	SYM	40 % to 60 %			at Vcc-1.30 V, Vc=1/2Vcc				
Rise/Fall times	tr/tf	0.5 ns Max.			at 20 % to 80 % output swing				
High input voltage	Vih	70% Vcc Min.							
Low input voltage	VIL	30% Vcc Max.							
Oscillation start up time	start up time t_str 10ms Max.								
Item	Offset frequence	cv 122.88 MHz	153.6 MHz	245.76	MHz	1			
	10 Hz	-75 dBc/Hz	-70 dBc/Hz -64 dBc						
Phase noise	100 Hz	-105 dBc/Hz	-100 dBc/Hz	-94 dB		1			
(Typical value)	1 kHz	-129 dBc/Hz	-124 dBc/Hz	-118 dB		1			
APR ±50 × 10 ⁻⁶ Min.	10 kHz	-147 dBc/Hz	-143 dBc/Hz -138 dB			1			
	100 kHz	-151 dBc/Hz -152 dBc/Hz		-149 dB		1			
					·				

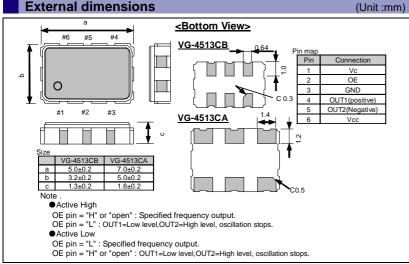
Product Name (Standard form) <u>VG-4513 CA</u> - <u>122.880000</u> - <u>G F C T</u> 4567

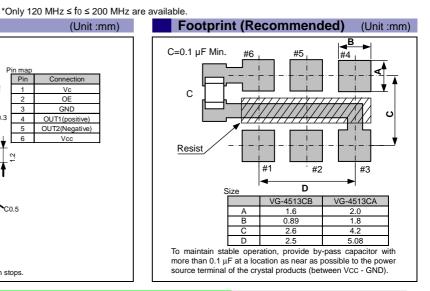
1 2 3

②Package type ③Frequency(MHz) ④Operating temperature range ⑤Absolute pull range Model ⑥Supply voltage (C: 3.3V Typ.) ⑦OE function

④Operating temperature		⑤Absolute pull range		⑦OE function	
G	-40 to +85℃	H*	±100 × 10 ⁻⁶ Min.	Т	Active High
J	-20 to +70℃	G	±50 × 10 ⁻⁶ Min.	Г	Active Low
Κ	0 to +70℃	F	±30 × 10 ⁻⁶ Min.		

External dimensions





SEIKO EPSON CORPORATION

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.

Pb Free	► Pb free.
RoHS	 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).

Notice

- This material is subject to change without notice.
- Any part of this material may not be reproduced or duplicated in any form or any means without the written permission of Seiko Epson.
 The information about applied data, circuitry, software, usage, etc. written in this material is intended for reference only. Seiko Epson does not assume any liability for the occurrence of customer damage or infringing on any patent or copyright of a third party. This material does not authorize the licensing for any patent or intellectual copyrights.
- When exporting the products or technology described in this material, you should comply with the applicable export control laws and
 regulations and follow the procedures required by such laws and regulations.
- You are requested not to use the products (and any technical information furnished, if any) for the development and/or manufacture of
 weapon of mass destruction or for other military purposes. You are also requested that you would not make the products available to
 any third party who may use the products for such prohibited purposes.
- These products are intended for general use in electronic equipment. When using them in specific applications that require extremely high reliability, such as the applications stated below, you must obtain permission from Seiko Epson in advance.
 / Space equipment (artificial satellites, rockets, etc.) / Transportation vehicles and related (automobiles, aircraft, trains, use etc.) / Madient intervented to a surface equipment (artificial satellites).
 - vessels, etc.) / Medical instruments to sustain life / Submarine transmitters / Power stations and related / Fire work equipment and security equipment / traffic control equipment / and others requiring equivalent reliability.
- All brands or product names mentioned herein are trademarks and/or registered trademarks of their respective.