

# CRYSTAL OSCILLATOR (SPXO)

## OUTPUT : CMOS

# SG5032CAN / CBN / CCN

# SG7050CAN / CBN / CCN

- Frequency range : CAN 1 to 75 MHz (Fundamental mode)  
: CBN 80 to 170 MHz (Fundamental mode)  
: CCN 2.5 to 50 MHz (Fundamental mode)
- Supply voltage : CAN / CBN 1.8 V to 3.6 V Typ.  
: CCN 5.0 V Typ.
- Function : CAN / CBN Standby( $\overline{ST}$ )  
: CCN Output enable(OE)
- Output : CMOS



Product Number (please contact us)  
 SG5032CAN: X1G004451xxxx00  
 SG5032CBN: X1G004461xxxx00  
 SG5032CCN: X1G004471xxxx00  
 SG7050CAN: X1G004481xxxx00  
 SG7050CBN: X1G004491xxxx00  
 SG7050CCN: X1G004501xxxx00



SG5032CAN/CBN/CCN  
(5.0 x 3.2 x 1.1 mm)



SG7050CAN/CBN/CCN  
(7.0 x 5.0 x 1.3 mm)

Actual size

SG5032CAN /CBN/CCN

SG7050CAN /CBN/CCN

### Specifications (characteristics)

Item	Symbol	Specifications			Conditions / Remarks
		SG5032CAN SG7050CAN	SG5032CBN SG7050CBN	SG5032CCN SG7050CCN	
Output frequency range	$f_o$	1 MHz to 75 MHz T: 1.6 V to 3.63 V T: 1.71 V to 3.63 V K: 2.25 V to 3.63 V	80 MHz to 170 MHz T: 1.6 V to 3.63 V	2.5 MHz to 50 MHz H: 4.5 V to 5.5 V	Please contact us about available frequencies. 1 MHz $\leq f_o \leq$ 60 MHz 60 MHz $< f_o \leq$ 75 MHz, +85 °C Max. 60 MHz $< f_o \leq$ 75 MHz, +105 °C Max. See *1 (CAN)
Supply voltage	$V_{cc}$				
Storage temperature	$T_{stg}$	-40 °C to +125 °C			Storage as single product.
Operating temperature	$T_{use}$	B: -20 °C to +70 °C, G: -40 °C to +85 °C H: -40 °C to +105 °C			See of figure *1 (CAN)
Frequency tolerance	$f_{tol}$	D ( Only CAN type ) : $\pm 25 \times 10^{-6}$ , J : $\pm 50 \times 10^{-6}$			-20 °C to +70 °C
		J : $\pm 50 \times 10^{-6}$			-40 °C to +85 °C
		K : $\pm 100 \times 10^{-6}$			-40 °C to +105 °C
		L : $\pm 100 \times 10^{-6}$			-40 °C to +105 °C
Current consumption	$I_{cc}$	3.0 mA Max.	11 mA Max.	20 mA Max.	No load condition Maximum frequency.
Stand-by current	$I_{std}$	2.7 $\mu$ A Max.	10 $\mu$ A Max.	-	$\overline{ST}$ = GND
Disable current	$I_{dis}$	-	-	10 mA Max.	OE = GND
Symmetry	SYM	45 % to 55 %		40 % to 60 %	50 % $V_{cc}$ level, $L_{CMOS} \leq 15$ pF
Output voltage	$V_{OH}$	$V_{cc} - 0.4$ Min.			
	$V_{OL}$	0.4 V Max.			
Output load condition	$L_{CMOS}$	15 pF Max.		50 pF Max.	CMOS load
Input voltage	$V_{IH}$	80 % $V_{cc}$ Min.			$\overline{ST}$ , OE terminal
	$V_{IL}$	20 % $V_{cc}$ Max.			
Rise time / Fall time	$t_r / t_f$	3 ns Max. 3.5nsMax.(@1.8V $\pm$ 10%)	3 ns Max.	5 ns Max.	20 % $V_{cc}$ to 80 % $V_{cc}$ level, $L_{CMOS} = 15$ pF
Start-up time	$t_{str}$	3 ms Max.	5 ms Max.		$t=0$ at 90 % $V_{cc}$ +85°C,(+105°C)
Frequency aging	$f_{aging}$	$\pm 3 \times 10^{-6}$ / year Max.	$\pm 5 \times 10^{-6}$ / year Max.		+25 °C, First year.

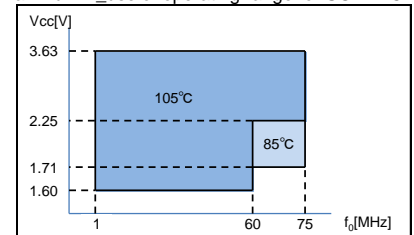
\*1 : Maximum  $T_{use}$  of operating range for SGxxxxCAN

Product Nam SG5032 C AN 25.000000MHz T J G A (ⓄⓄ: Available code DB,JB,JG,JH,LG,LH)  
 (Standard form) ① ② ③ ④⑤⑥⑦  
 ①Model ②Output (C:CMOS) ③Frequency  
 ④Supply voltage ⑤Frequency tolerance  
 ⑥Operating temperature range ⑦Internal identification code ("A" is default)

④Supply voltage	
T	1.6 to 3.63 V
	1.71 ~ 3.63 V See *1
K	2.25 ~ 3.63 V (CAN)
H	4.5 ~ 5.5 V

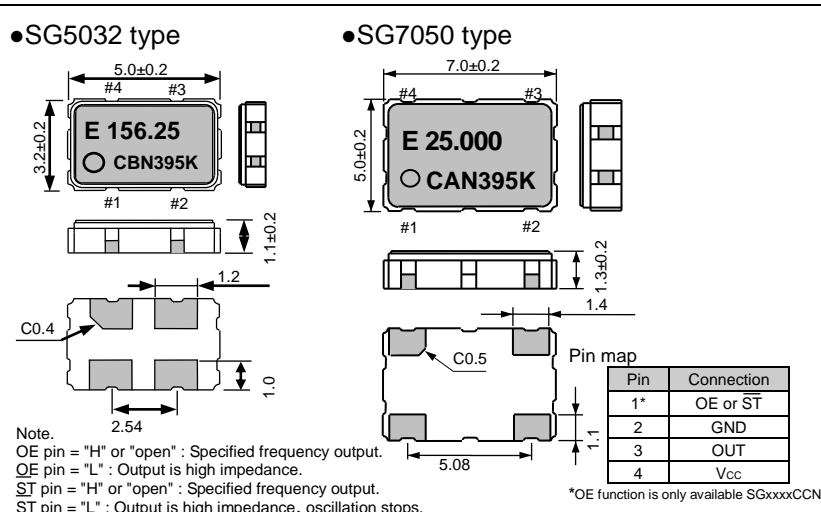
⑤Frequency tolerance	
D	$\pm 25 \times 10^{-6}$
J	$\pm 50 \times 10^{-6}$
L	$\pm 100 \times 10^{-6}$

⑥Operating temperature range	
B	-20 to +70°C
G	-40 to +85°C
H	-40 to +105°C



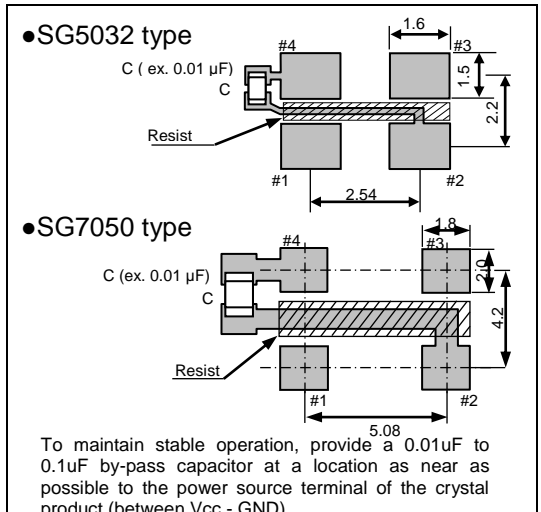
### External dimensions

(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 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 ).

## 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, 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.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Epson:

[SG7050EBN 100.000000M-CJGA3](#) [SG7050EBN 156.250000M-CJGA3](#) [SG7050EBN 125.000000M-DJGA3](#)  
[SG7050EBN 100.000000M-DJGA3](#) [SG7050EBN 114.285000M-CJGA3](#) [SG7050EBN 125.000000M-CJGA3](#)  
[SG7050CAN 5.000000M-TJGA3](#) [SG5032CAN 30.000000M-TJGA3](#) [SG7050CCN 10.000000M-HJGA3](#) [SG7050CAN](#)  
[4.000000M-TJGA3](#) [SG5032CCN 3.276800M-HJGA3](#) [SG7050CAN 30.000000M-TJGA3](#) [SG5032CAN 20.000000M-](#)  
[TJGA3](#) [SG7050CAN 3.579545M-TJGA3](#) [SG7050CCN 18.432000M-HJGA3](#) [SG7050CCN 3.686400M-HJGA3](#)  
[SG5032CCN 4.000000M-HJGA3](#) [SG5032CCN 3.579545M-HJGA3](#) [SG7050CAN 1.843200M-TJGA3](#) [SG7050CAN](#)  
[27.000000M-TJGA3](#) [SG7050CAN 12.288000M-TJGA3](#) [SG7050CAN 14.318180M-TJGA3](#) [SG5032CCN 40.000000M-](#)  
[HJGA3](#) [SG7050CCN 4.096000M-HJGA3](#) [SG5032CAN 74.250000M-TJGA3](#) [SG5032CCN 6.000000M-HJGA3](#)  
[SG7050CAN 40.000000M-TJGA3](#) [SG5032CAN 14.745600M-TJGA3](#) [SG7050CBN 125.000000M-TJGA3](#) [SG5032CAN](#)  
[16.384000M-TJGA3](#) [SG5032CAN 1.843200M-TJGA3](#) [SG5032CCN 4.096000M-HJGA3](#) [SG7050CCN 32.000000M-](#)  
[HJGA3](#) [SG7050CCN 4.915200M-HJGA3](#) [SG5032CAN 7.372800M-TJGA3](#) [SG7050CAN 74.250000M-TJGA3](#)  
[SG5032CAN 60.000000M-TJGA3](#) [SG5032CAN 2.000000M-TJGA3](#) [SG5032CAN 27.000000M-TJGA3](#) [SG7050CBN](#)  
[156.250000M-TJGA3](#) [SG7050CCN 24.576000M-HJGA3](#) [SG7050CCN 24.000000M-HJGA3](#) [SG7050CCN 4.000000M-](#)  
[HJGA3](#) [SG5032CCN 29.491200M-HJGA3](#) [SG5032CBN 106.250000M-TJGA3](#) [SG7050CAN 2.000000M-TJGA3](#)  
[SG5032CAN 24.000000M-TJGA3](#) [SG7050CAN 33.000000M-TJGA3](#) [SG7050CAN 14.745600M-TJGA3](#) [SG5032CAN](#)  
[2.457600M-TJGA3](#) [SG5032CAN 12.288000M-TJGA3](#) [SG5032CAN 32.000000M-TJGA3](#) [SG5032CAN 13.560000M-](#)  
[TJGA3](#) [SG7050CAN 32.000000M-TJGA3](#) [SG7050CAN 11.059200M-TJGA3](#) [SG7050CBN 100.000000M-TJGA3](#)  
[SG5032CBN 125.000000M-TJGA3](#) [SG5032CAN 8.000000M-TJGA3](#) [SG7050CCN 7.372800M-HJGA3](#) [SG-7050CAN](#)  
[13.560000M-TJGA3](#) [SG5032CCN 3.686400M-HJGA3](#) [SG5032CCN 12.288000M-HJGA3](#) [SG7050CAN 25.000000M-](#)  
[TJGA3](#) [SG7050CAN 6.000000M-TJGA3](#) [SG7050CAN 20.000000M-TJGA3](#) [SG7050CAN 33.333000M-TJGA3](#)  
[SG5032CCN 10.000000M-HJGA3](#) [SG7050CAN 12.000000M-TJGA3](#) [SG7050CCN 3.276800M-HJGA3](#) [SG7050CCN](#)  
[11.059200M-HJGA3](#) [SG5032CBN 100.000000M-TJGA3](#) [SG5032CAN 22.579200M-TJGA3](#) [SG7050CAN 62.500000M-](#)  
[TJGA3](#) [SG7050CCN 25.000000M-HJGA3](#) [SG7050CCN 27.000000M-HJGA3](#) [SG5032CCN 24.000000M-HJGA3](#)  
[SG5032CAN 4.000000M-TJGA3](#) [SG5032CCN 20.000000M-HJGA3](#) [SG7050CAN 50.000000M-TJGA3](#) [SG7050CCN](#)  
[14.745600M-HJGA3](#) [SG7050CCN 8.000000M-HJGA3](#) [SG7050CAN 48.000000M-TJGA3](#) [SG7050CAN 22.579200M-](#)  
[TJGA3](#) [SG5032CAN 48.000000M-TJGA3](#) [SG7050CCN 20.000000M-HJGA3](#) [SG5032CAN 24.576000M-TJGA3](#)  
[SG7050CAN 24.576000M-TJGA3](#) [SG5032CAN 26.000000M-TJGA3](#) [SG5032CAN 33.000000M-TJGA3](#) [SG5032CCN](#)  
[32.000000M-HJGA3](#) [SG7050CBN 133.000000M-TJGA3](#) [SG5032CAN 1.000000M-TJGA3](#) [SG7050CCN 16.000000M-](#)  
[HJGA3](#) [SG5032CAN 66.000000M-TJGA3](#) [SG5032CAN 3.686400M-TJGA3](#) [SG5032CAN 16.000000M-TJGA3](#)

[SG5032CCN 25.000000M-HJGA3](#) [SG5032CAN 14.318180M-TJGA3](#) [SG7050CAN 16.000000M-TJGA3](#) [SG5032CCN 18.432000M-HJGA3](#)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.