CRYSTAL OSCILLATOR (SPXO)

NEW

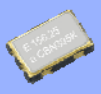
OUTPUT : CMOS

SG5032CAN / CBN / CCN
SG7050CAN / CBN / CCN

- •Frequency range : 1 MHz to 170 MHz (Fundamental mode)
- •Supply voltage : 1.8 V to 5.0 V
- •Function : Standby($\overline{ST}$) ···SGxxxxCAN / CBN
  : Output enable(OE) ···SGxxxxCCN
- • Output : CMOS

Pb Free RoHS Compliant

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



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

SG7050CAN/CBN/CCN
(7.0 × 5.0 × 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	f0	1 MHz to 75 MHz	80 MHz to 170 MHz	2.5 MHz to 50 MHz	Please contact us about available frequencies.
Supply voltage	Vcc	T: 1.6 V to 3.6 V		H: 4.5 V to 5.5 V	
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	-		
Frequency tolerance	f_tol	D : ±25 × 10^{-6}, J : ±50 × 10^{-6}			-20 °C to +70 °C
		J : ±50 × 10^{-6}			-40 °C to +85 °C
		L : ±100 × 10^{-6}	-	-	-40 °C to +105 °C
Current consumption	Icc	3.0 mA Max.	11 mA Max.	20 mA Max.	No load condition Maximum frequency.
Stand-by current	I_std	2.7 µA Max.	10 µA Max.	-	$\overline{ST}$ =GND
Disable current	I_dis	-	-	10 mA Max.	OE=GND
Symmetry	SYM	45 % to 55 %		40 % to 60 %	50 % Vcc level, L_CMOS ≤ 15 pF
Output voltage	VOH	Vcc-0.4 Min.			
	VOL	0.4 V Max.			
Output load condition	L_CMOS	15 pF Max.		50 pF Max.	CMOS load
Input voltage	VIH	80 % Vcc Min.			$\overline{ST}$,OE terminal
	VIL	20 % Vcc Max.			
Rise time / Fall time	tr/ tf	4 ns Max.	3 ns Max.	5 ns Max.	20 % Vcc to 80 % Vcc level, L_CMOS =15 pF
Start-up time	t_str	3 ms Max.	5 ms Max.		t=0 at 90 % Vcc +85°C,(+105°C)
Frequency aging	f_aging	±3 × 10^{-6} / year Max.	±5 × 10^{-6} / year Max.		+25 °C, First year.

Product Name (Standard form): SG5032 C AN 25.000000MHz T J G A (⑤⑥: DG, DH, JH, LB are not available)
① ② ③ ④⑤⑥⑦
①Model ②Output (C:CMOS) ③Frequency ④Supply voltage ⑤Frequency tolerance
⑥Operating temperature range ⑦Internal identification code (“A” is default)

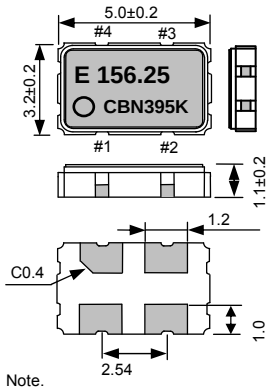
④Supply voltage	
T	1.6 to 3.6 V
H	4.5 to 5.5 V

⑤Frequency tolerance	
D	±25 × 10^{-6}
J	±50 × 10^{-6}
L	±100 × 10^{-6}

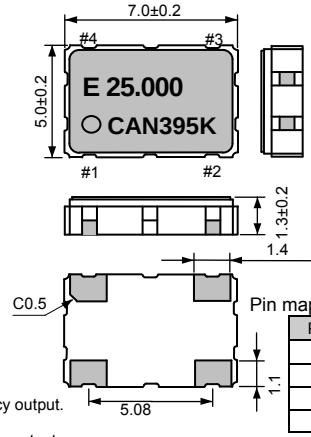
⑥Operating temperature range	
B	-20 to +70°C
G	-40 to +85°C
H	-40 to +105°C

External dimensions (Unit:mm)

●SG5032 type



●SG7050 type



Pin map

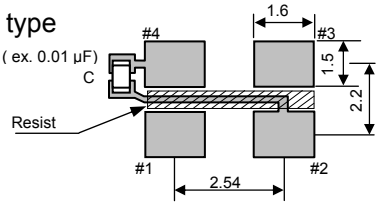
Pin	Connection
1*	OE or $\overline{ST}$
2	GND
3	OUT
4	Vcc

*OE function is only available SGxxxxCCN

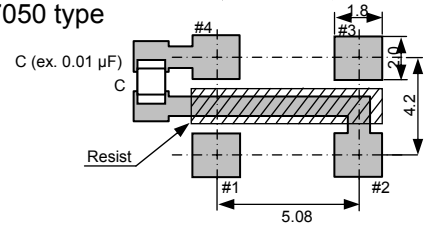
Note.
OE pin = "H" or "open" : Specified frequency output.
OE pin = "L" : Output is high impedance.
$\overline{ST}$ pin = "H" or "open" : Specified frequency output.
$\overline{ST}$ pin = "L" : Output is high impedance、oscillation stops.

Footprint (Recommended) (Unit:mm)

●SG5032 type



●SG7050 type



To maintain stable operation, provide a 0.01uF to 0.1uF by-pass capacitor at a location as near as possible to the power source terminal of the crystal product (between Vcc - GND).

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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