



CRYSTAL OSCILLATOR (SPXO)

OUTPUT : CMOS

NEW

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

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



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	f _o	1 MHz to 75 MHz	80 MHz to 170 MHz	2.5 MHz to 50 MHz	Please contact us about available frequencies.
Supply voltage	V _{CC}	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}	G: -40 °C to +85 °C			
		H: -40 °C to +105 °C	-		
Frequency tolerance	f _{tol}	J : ±50 × 10 ⁻⁶			-40 °C to +85 °C
		L : ±100 × 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 μA Max.	10 μA Max.	-	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} ≤ 15 pF
Output voltage	V _{OH}	V _{CC} -0.4 Min.			
	V _{OL}	0.4 V Max.			
Output load condition (CMOS)	L _{CMOS}	15 pF Max.		50 pF Max.	
Input voltage	V _{IH}	80 % V _{CC} Min.			ST ,OE terminal
	V _{IL}	20 % V _{CC} Max.			
Rise time / Fall time	tr/ tr	4 ns Max.	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}	±3 × 10 ⁻⁶ / year Max.	±5 × 10 ⁻⁶ / year Max.		+25 °C, First year.

Product Name SG5032 C AN 25.000000MHz T J G A (ⒺⒺ: JH is not available)

(Standard form)

① ② ③ ④ ⑤ ⑥ ⑦

① Model ② Output (C:CMOS) ③ Frequency ④ Supply voltage ⑤ Frequency tolerance

⑥ Operating temperature range ⑦ Internal identification code

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

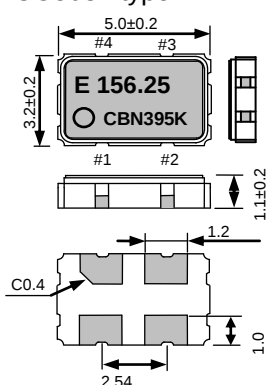
⑤ Frequency tolerance	
J	$\pm 50 \times 10^{-6}$
L	$\pm 100 \times 10^{-6}$

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

External dimensions

(Unit:mm)

•SG5032 type



Note.

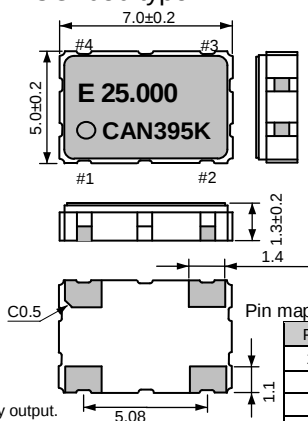
OE pin = "H" or "open" : Specified frequency output.

OE pin = "L" : Output is high impedance.

ST pin = "H" or "open" : Specified frequency output.

ST pin = "L" : Output is high impedance, oscillation stops.

•SG7050 type



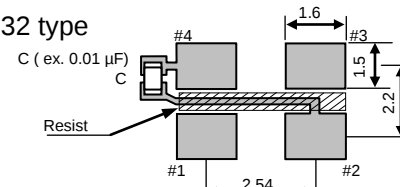
*OE function is only available SGxxxxCCN

Pin	Connection
1*	OE or ST
2	GND
3	OUT
4	V_{CC}

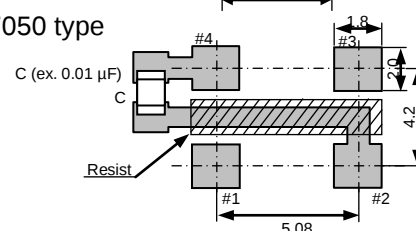
Footprint (Recommended)

(Unit:mm)

•SG5032 type



•SG7050 type



To maintain stable operation, provide a 0.01 μ F to 0.1 μ F by-pass capacitor at a location as near as possible to the power source terminal of the crystal product (between V_{CC} - GND).