



CRYSTAL OSCILLATOR (SPXO)

OUTPUT : CMOS



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.	-	\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 ≤ 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.			\overline{ST} , OE terminal
	V _{IL}	20 % V _{cc} Max.			
Rise time / Fall time	t _r / t _f	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 ④⑤⑥⑦

①Model ②Output (C:CMOS) ③Frequency ④Supply voltage ⑤Frequency tolerance
 ⑥Operating temperature range ⑦Internal identification code

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

Ⓢ Frequency tolerance	
J	±50 × 10 ⁻⁶
L	±100 × 10 ⁻⁶

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

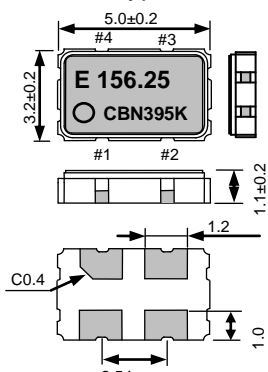
External dimensions

(Unit:mm)

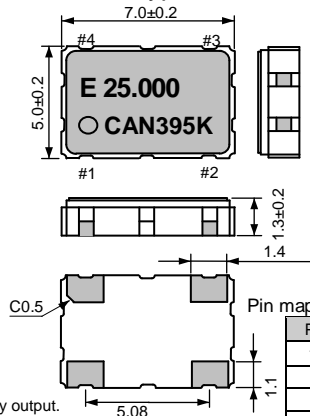
Footprint (Recommended)

(Unit:mm)

•SG5032 type



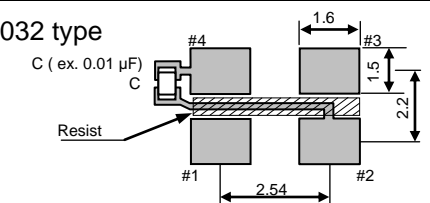
•SG7050 type



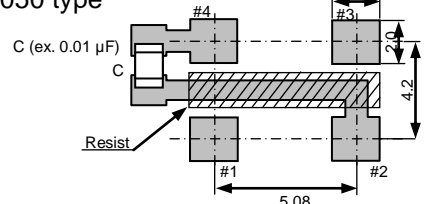
Pin	Connection
1*	OE or \overline{ST}
2	GND
3	OUT
4	V _{cc}

*OE function is only available SGxxxxCCN

•SG5032 type



•SG7050 type



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

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.