



NEW



Product Number (please contact us)
X1B000211xxxx00

CRYSTAL OSCILLATOR

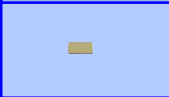
32.768 kHz

SG-3030 CM

- Built-in 32.768 kHz crystal unit allows adjustment-free efficient operation.
- Use of C-MOS IC enables reduction of current consumption.
- VIO controls swing amplitude.



Actual size

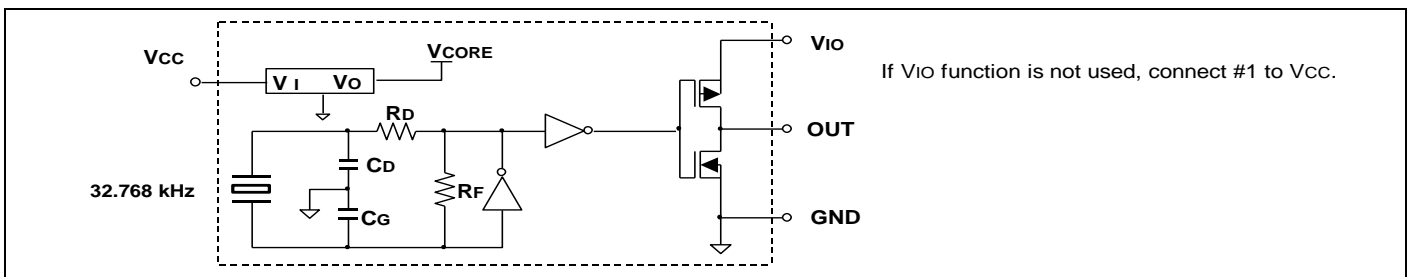


Specifications (characteristics)

Item	Symbol	Specifications	Remarks	
Output frequency range	f ₀	32.768 kHz		
Supply voltage	V _{CC}	1.5 V to 5.5 V		
Interface power supply voltage	V _{IO}	1.5 V to 5.5 V		
Temperature range	Storage temperature	T _{stg}	-55 °C to +125 °C	Store as bare product after unpacking
	Operating temperature	T _{use}	-40 °C to +85 °C	
Frequency tolerance	f _{tol}	+5 ± 23 × 10 ⁻⁶	+25 °C, V _{CC} =3.3V	
Frequency temperature coefficient	f _o -T _C	+10 × 10 ⁻⁶ / -120 × 10 ⁻⁶	-20 °C to +70 °C (+25 °C is reference)	
Frequency voltage coefficient	f _o -V _{CC}	±2 × 10 ⁻⁶ / V Max	+25 °C,	
Current consumption	I _{CC}	2 µA Max.	3.3V, No load condition	
Symmetry	SYM	45 % to 55 %	1/2V _{CC} (V _{IO}) level	
High output voltage	V _{OH}	V _{IO} -0.4V Min.	I _{OH} =-0.4mA	
Low output voltage	V _{OL}	0.4V Max.	I _{OL} = 0.4mA	
Output load condition (CMOS)	L _{CMOS}	15 pF Max.	CMOS load	
Rise time / Fall time	t _r / t _f	200 ns Max.	CMOS load:20 % V _{CC} (V _{IO}) to 80 % V _{CC} (V _{IO}) level	
Start-up time	t _{str}	1 s Max.	Time at minimum Supply voltage to be 0s +25 °C	
Frequency aging	f _{aging}	±5 × 10 ⁻⁶ / year Max.	+25 °C, V _{CC} =3.3 V, First year	

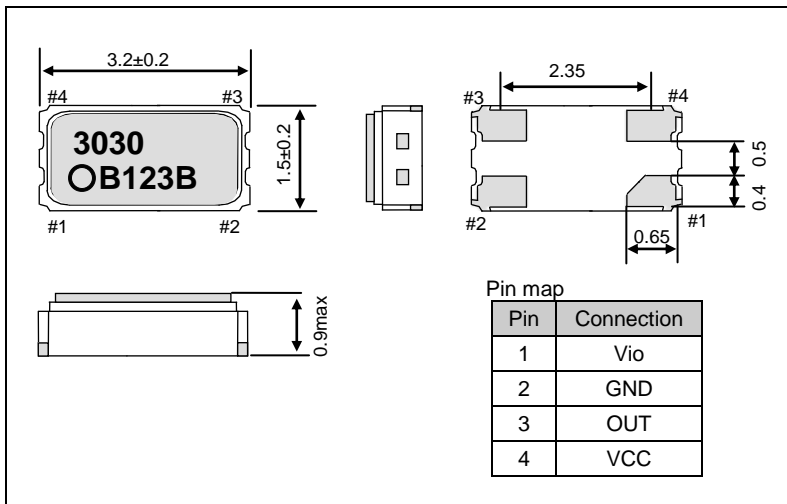
Unless otherwise stated, characteristics (specifications) shown in the above table are based on the rated operating temperature and voltage condition.

Block diagram



External dimensions

(Unit:mm)



Footprint (Recommended)

(Unit:mm)

