

NEW



Product Number (please contact us)
X1G004171xxxx00

**CRYSTAL OSCILLATOR
SPXO**

SG-210 STF

- Frequency range : 1 MHz to 60 MHz
- Supply voltage : 1.6 V to 3.6 V
- Function : Standby(\overline{ST})
- External dimensions : 2.5 × 2.0 × 0.8 mm
- Operation temperature : -40 to +105 °C



Actual size

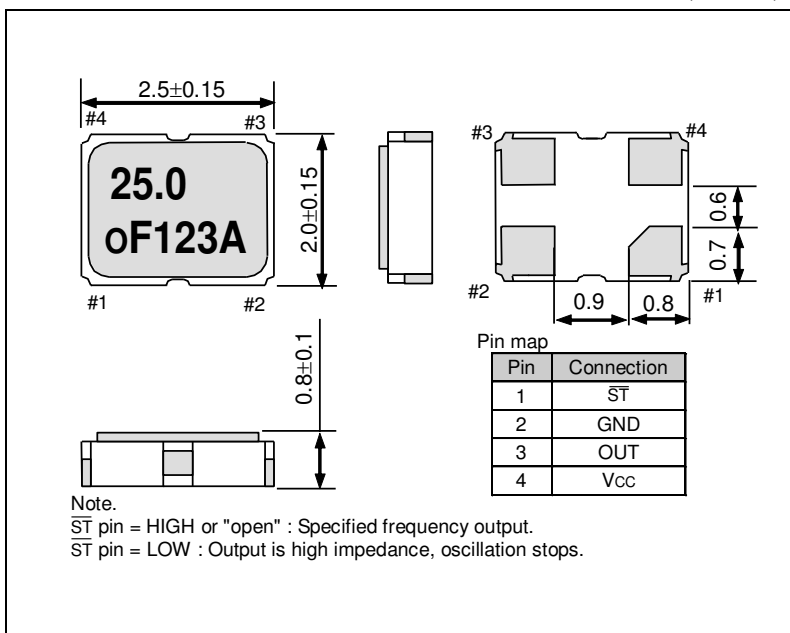


Specifications (characteristics)

Item	Symbol	Specifications	Conditions / Remarks		
Output frequency range	f_0	1MHz to 60MHz	Please contact us for inquiries regarding available frequencies		
Supply voltage	V_{CC}	1.6V to 3.6V			
		1.8 V Typ. 1.6 V to 2.2 V		2.5 V Typ. 2.2 V to 3.0 V	3.3 V Typ. 2.7 V to 3.6 V
Storage temperature	T_{stg}	-40 °C to +125 °C	Store as bare product.		
Operating temperature	T_{use}	-40 °C to +85 °C / -40 °C to +105 °C			
Frequency tolerance	f_{tol}	S: $\pm 25 \times 10^{-6}$	-20 °C to +70 °C		
		L: $\pm 50 \times 10^{-6}$	-40 °C to +85 °C		
		Y: $\pm 50 \times 10^{-6}$, W: $\pm 100 \times 10^{-6}$	-40 °C to +105 °C		
Current consumption	I_{CC}	1.5 mA Max.	No load condition 1MHz < f_0 ≤ 20MHz		
		1.8 mA Max.	No load condition 20MHz < f_0 ≤ 40MHz		
		2.1 mA Max.	No load condition 40MHz < f_0 ≤ 60MHz		
Stand-by current	I_{std}	2.1 μA Max.	ST = GND		
		2.5 μA Max.			
		2.7 μA Max.			
Symmetry	SYM	45 % to 55 %	50 % V_{CC} level $L_{CMOS} \leq 15$ pF		
Output voltage	V_{OH}	90% V_{CC} Min.			
	V_{OL}	10% V_{CC} Max..			
Output load condition (CMOS)	L_{CMOS}	15 pF Max.			
Input voltage	V_{IH}	80 % V_{CC} Min.	\overline{ST} terminal		
	V_{IL}	20 % V_{CC} Max.			
Rise time and Fall time	t_r / t_f	4 ns Max. / 3 ns Max.	20 % V_{CC} to 80 % V_{CC} level, $L_{CMOS} = 15$ pF		
Start-up time	t_{str}	3 ms Max.	$t = 0$ at 90 % $V_{CC} + 85^\circ C, (+105^\circ C.)$		
Frequency aging	f_{aging}	$\pm 3 \times 10^{-6}$ / year Max.	+25 °C, First year, $V_{CC} = 1.8$ V, 2.5 V, 3.3 V		
SSB Phase noise	C/N	-145 dBc/Hz Typ.	@1kHz, $f_0 = 48$ MHz		
		-158 dBc/Hz Typ.	@100kHz, $f_0 = 48$ MHz		
		-161 dBc/Hz Typ.	@Floor Lv.		

External dimensions

(Unit:mm)



Footprint (Recommended)

(Unit:mm)

