

Preliminary

CRYSTAL OSCILLATOR - SPXO -

SG-210S*B

- Frequency range : 2 MHz to 48 MHz
- Supply voltage : 1.5V Typ. / 1.8 V Typ. / 2.5 V Typ. / 3.3 V Typ.
- Current consumption : SEB 1.8 V No load condition 48 MHz 0.9mA Typ.
- Thickness : 0.8 mm Typ.
- Lead(Pb)-free : Lead free completely

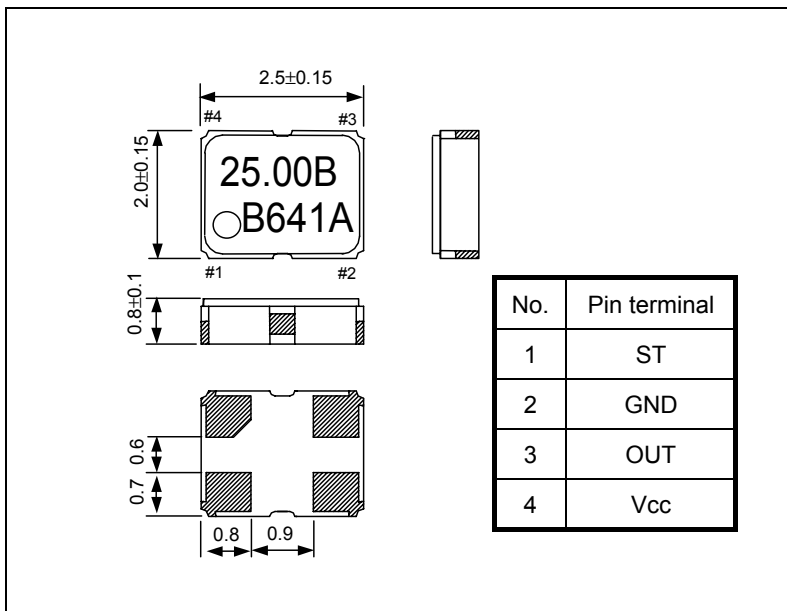


Specifications (characteristics)

Item	Symbol	Specifications				Remarks
		SGB	SEF	SDF	SCF	
Output frequency range	f _o	2.000 MHz to 32.000 MHz	2.000 MHz to 48.000 MHz			
Supply voltage	V _{cc}	1.5V Typ, 1.3V to 1.7V	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	
Temperature range	Storage temperature	-40 °C to +125 °C				Stored as bare product after unpacking
	Operating temperature	-40 °C to +85 °C				
Frequency tolerance	F _{tol(osc)}	B: ±50 × 10 ⁻⁶ , C: ±100 × 10 ⁻⁶ L: ±50 × 10 ⁻⁶ , M: ±100 × 10 ⁻⁶				-20 °C to +70 °C -40 °C to +85 °C
Current consumption	I _{cc}	-	1.6 mA Max.	2.4 mA Max.	3.0 mA Max.	No load condition, 2 MHz ≤ f _o ≤ 48 MHz
		1.0mA Max,	-	-	-	No load condition, 2MHz ≤ f _o ≤ 32 MHz
Stand-by current	I _{std}	0.3 μA Max.	0.5 μA Max.	1.0 μA Max.	1.0 μA Max.	ST = GND
Symmetry	SYM	45 % to 55 %	45 % to 55 %		45 % to 55 %	2 MHz ≤ f _o ≤ 16 MHz
		40 % to 60 %	40 % to 60 %			16 MHz < f _o ≤ 32 MHz
		-	40 % to 60 %		-	32 MHz < f _o ≤ 48 MHz
High output voltage	V _{OH}	90 % V _{cc} Min.				I _{OH} = -1 mA
Low output voltage	V _{OL}	10 % V _{cc} Max.				I _{OL} = 1 mA
Output load condition (CMOS)	L _{CMOS}	15 pF Max.				
Output enable / disable input voltage	V _{IH}	80 % V _{cc} Min.				ST terminal
	V _{IL}	20 % V _{cc} Max.				
Output rise and fall time	tr/ tf	5ns Max,	4 ns Max.			20 % V _{cc} to 80 % V _{cc} level, L _{CMOS} = 15 pF
Oscillation start up time	t _{osc}	5 ms Max.				t=0 at 90 % V _{cc}
Frequency aging	F _{aging}	±3 × 10 ⁻⁶ / year Max.				+25 °C, First year, V _{cc} = 1.5V, 1.8 V, 2.5 V, 3.3 V

External dimensions

(Unit:mm)



Footprint (Recommended)

(Unit:mm)

