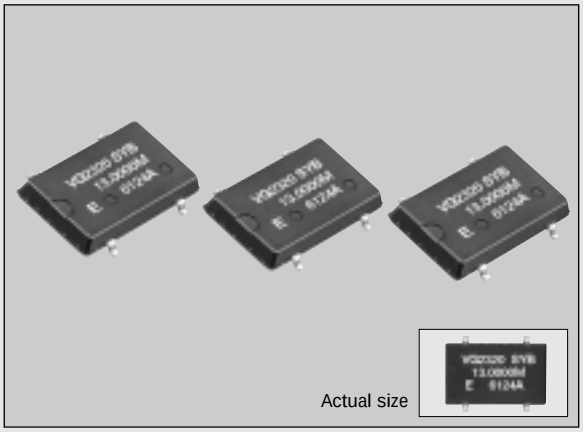
THIN SOP VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR

VG-2320SC series

- Thin package of 2mm thickness.
- High accuracy and high reliability due to trimmerless design.
- Excellent shock resistance and environmental capability.
- Low current consumption by the use of C-MOS IC.
- Operating voltage: 2.7 to 3.3V, Vc=1.5V ±1.2V
- Optimal as reference signal source for mobile communications equipment.



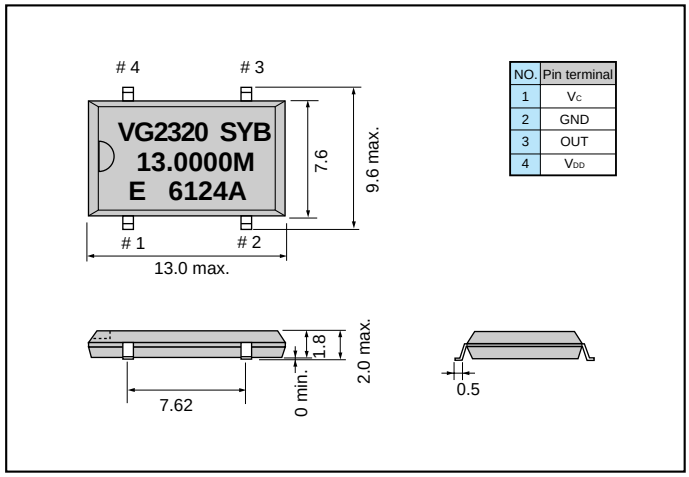
Specifications (characteristics)

Item		Symbol	VG-2320SC SYB Specifications	Remarks
Output frequency range		f_0	12.0000 MHz to 20.0000 MHz	
Power source voltage	Max. supply voltage	V_{DD}-GND	-0.3V to +7.0V	
	Operating voltage	V_{DD}	3.0V ±0.3V	
Temperature range	Storage temperature	T_{STG}	-55˚C to +125˚C	
	Operating temperature	T_{OPR}	-20˚C to + 75˚C	
Soldering condition		T_{SOL}	Twice at under 240˚C within 10 sec.	
Frequency stability		$\Delta f/f_0$	±15ppm	
Current consumption		Iop	2.5mA max.	No load condition
Pull range		Δf_c	±20ppm min.	V_c=1.5±1.2V
Control voltage sensitivity			19ppm/V min.	
Input resistance		Z_{IN}	10MΩ min.	DC Level
Frequency change polarity			Positive polarity	V_c=0.3 to 2.7V
Duty		tw/t	40% to 60%	GND Level
Output load condition (fan out)		R_L/C_L	2kΩ /10pF	
Output level		V_{PP}	1.0V min.	
Output signal harmonic ratio			-5dBc max.	
Phase noise			-120dBc/Hz max.	Offset: 1kHz
Oscillation start up time		t_{OSC}	4ms. max.	Time at V_{DD}=2.7V to be 0 sec.
Aging		fa	±1ppm max.	Ta=25˚C, V_{DD} =3V
Shock resistance		S.R.	±1ppm max.	Three drops on a hard board from 75 cm or excitation test with 3000G x 0.3ms x 1/2sine wave in 3 directions

There are some cases that a parts of the case of quartz resonator expose on the surface of the molding material.

External dimensions

(Unit: mm)



Recommended soldering pattern

(Unit: mm)