

HIGH-STABILITY HIGH-FREQUENCY OSCILLATOR

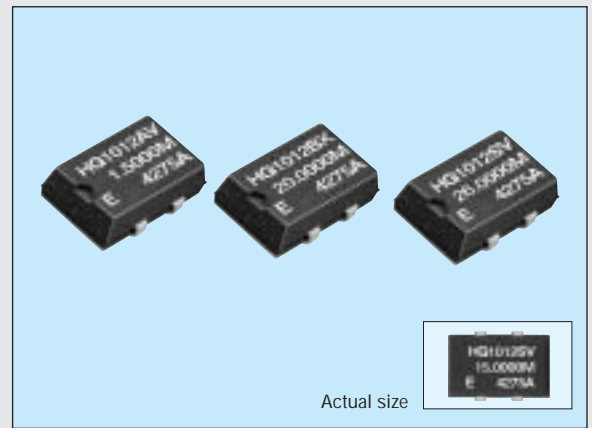
HG-1012JA/2012JA

Product number (please refer to page 2)

Q3511JA0xxxxxx00

Q3512JA0xxxxxx00

- Cylindrical AT crystal unit built-in, thus assuring high reliability.
- Excellent heat resistance.
- Low current consumption.

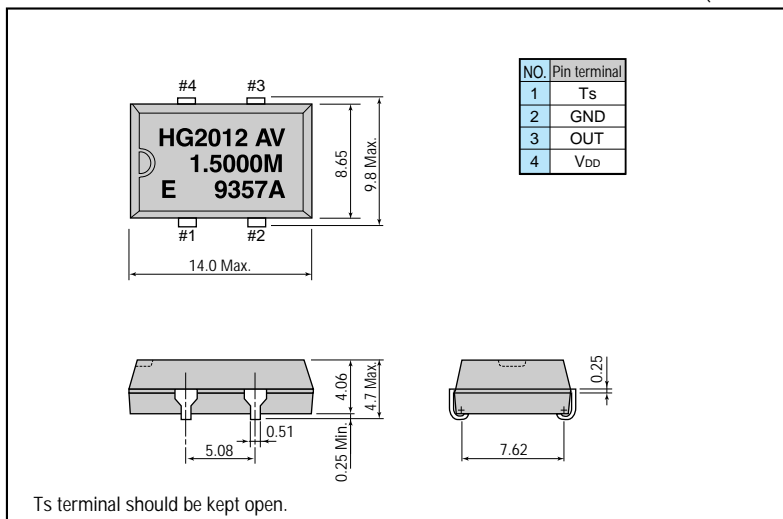


Specifications (characteristics)

Item	Symbol	Specifications		Remarks
		HG-1012JA	HG-2012JA	
Output frequency range	f_0	1.5000 MHz to 28.63636 MHz		$V_{DD}=4.75$ V to 5.25 V
Power source voltage	Max. supply voltage	V_{DD-GND} -0.5 V to +7.0 V		
	Operating voltage	V_{DD} 5.0 V ± 0.25 V		
Temperature range	Storage temperature	T_{STG} -55 °C to +125 °C		Stored as bare product after unpacking
	Operable temperature	T_{OPR} -40 °C to +85 °C		
Frequency stability	$\Delta f/f_0$	AV: $\pm 20 \times 10^{-6}$, BV: $\pm 25 \times 10^{-6}$	SV: $\pm 15 \times 10^{-6}$, AV: $\pm 20 \times 10^{-6}$	$T_a = -20$ °C to +70 °C
		BX: $\pm 25 \times 10^{-6}$, CX: $\pm 30 \times 10^{-6}$	BX: $\pm 25 \times 10^{-6}$	$T_a = -40$ °C to +85 °C
Current consumption	I_{OP}	10 mA Max.		No load condition
Duty	t_w/t	40 % to 60 %		1/2 V_{DD} level
High output voltage	V_{OH}	$V_{DD} - 0.4$ V Min.		$I_{OH} = -0.8$ mA
Low output voltage	V_{OL}	0.4 V Max.		$I_{OL} = 3.2$ mA
Output load condition	C_L	15 pF Max.		
Output rise time	t_{TLH}	8 ns Max.		20 % \rightarrow 80 % V_{DD} level
Output fall time	t_{THL}	8 ns Max.		80 % \rightarrow 20 % V_{DD} level
Oscillation start up time	t_{OSC}	4 ms Max.		Time at 4.75 V to be 0 s
Aging	f_a	$\pm 5 \times 10^{-6}$ /year Max.	$\pm 2 \times 10^{-6}$ /year Max.	$T_a = +25$ °C, first year
Shock resistance	S.R.	$\pm 10 \times 10^6$ Max.	$\pm 2 \times 10^6$ Max.	Three drops on a hard wooden board from 750 mm or excitation test with 29400 m/s ² x 0.3 ms x 1/2sine wave in 3 directions

External dimensions

(Unit: mm)



Recommended soldering pattern

(Unit: mm)

