

HIGH-STABILITY HIGH-FREQUENCY OSCILLATOR

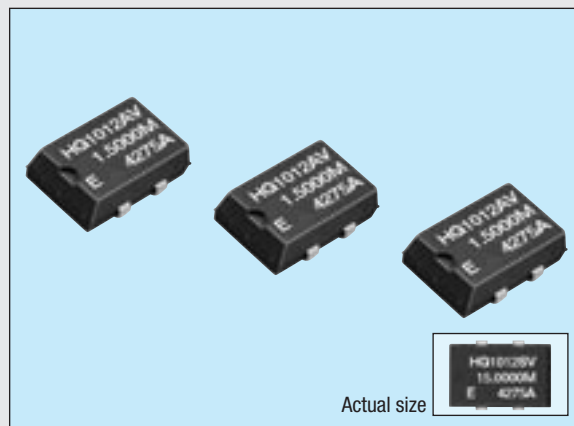
HG-1012JA / 2012JA

Product number (please refer to page 3)

Q3511JA0xxxxx00

Q3512JA0xxxxx00

- Cylindrical AT crystal unit built-in, thus assuring high reliability.
- Excellent heat resistance.
- Low current consumption.
- Available for lead (Pb)-free soldering.
- Available for lead (Pb)-free terminal.

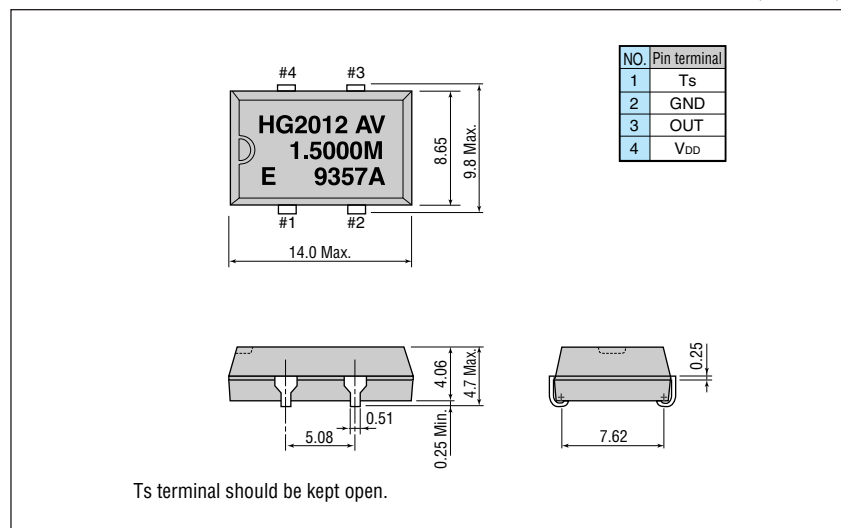


■ Specifications (characteristics)

Item	Symbol	Specifications		Remarks
		HG-1012JA	HG-2012JA	
Output frequency range	f_o	1.5000 MHz to 28.63636 MHz		$V_{DD} = 4.75 \text{ V to } 5.25 \text{ V}$
Power source voltage	Max. supply voltage	$V_{DD}-GND$		-0.5 V to +7.0 V
	Operating voltage	V_{DD}		5.0 V $\pm 0.25 \text{ V}$
Temperature range	Storage temperature	T_{STG}		-55 °C to +125 °C
	Operating temperature	T_{OPR}		-40 °C to +85 °C
Frequency stability	$\Delta f/f_o$	AV: $\pm 20 \times 10^{-6}$, BV: $\pm 25 \times 10^{-6}$	SV: $\pm 15 \times 10^{-6}$, AV: $\pm 20 \times 10^{-6}$	$T_a = -20 \text{ °C to } +70 \text{ °C}$
		BX: $\pm 25 \times 10^{-6}$, CX: $\pm 30 \times 10^{-6}$	BX: $\pm 25 \times 10^{-6}$	$T_a = -40 \text{ °C to } +85 \text{ °C}$
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}	$V_{DD} - 0.4 \text{ V Min.}$		$I_{OH} = -0.8 \text{ mA}$
Low output voltage	V_{OL}	0.4 V Max.		$I_{OL} = 3.2 \text{ mA}$
Output load condition	C_L	15 pF		
Output rise time	t_r	8 ns Max.		20 % \rightarrow 80 % V_{DD} level
Output fall time	t_f	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	$\pm 5 \times 10^{-6} / \text{year Max.}$	$\pm 2 \times 10^{-6} / \text{year Max.}$	$T_a = +25 \text{ °C}$, first year
Shock resistance	S.R.	$\pm 10 \times 10^{-6} \text{ Max.}$	$\pm 2 \times 10^{-6} \text{ Max.}$	Three drops on a hard 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)

