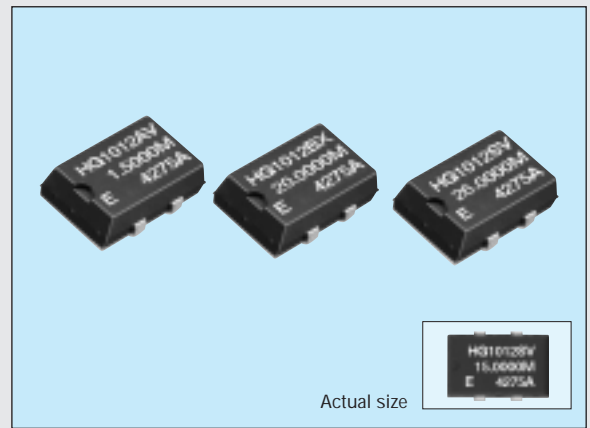


HIGH-STABILITY HIGH-FREQUENCY OSCILLATOR

HG-1000/2000 series

- Cylindrical AT crystal unit builtin, thus assuring high reliability.
- Excellent shock resistance and heat resistance.
- Low current consumption.

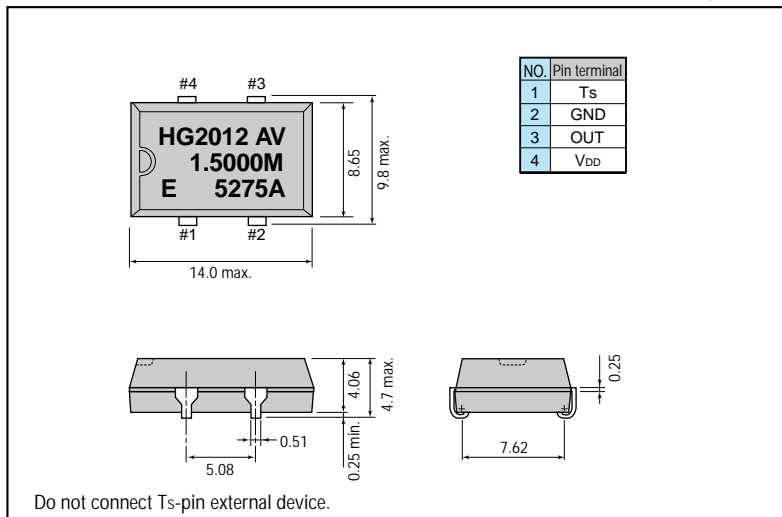


■ Specifications (characteristics)

Item	Symbol	HG-1012JA	HG-2012JA	Remarks
		Specifications		
Output frequency range	f_0	1.5000 MHz to 28.63636 MHz		$V_{DD} = 4.75V$ to $5.25V$
Power source voltage	Max. supply voltage	V_{DD-GND}	-0.5V to +7.0V	
	Operating voltage	V_{DD}	$5.0V \pm 0.25V$	
Temperature range	Storage temperature	T_{STG}	-55°C to +125°C	
	Operable temperature	T_{OPR}	-40°C to +85°C	
Soldering condition	T_{SOL}	Under 260°C within 10 sec. x 2 times		
Frequency stability	$\Delta f/f_0$	AV: $\pm 20ppm$, BV: $\pm 25ppm$ BX: $\pm 25ppm$, CX: $\pm 30ppm$	SV: $\pm 15ppm$, AV: $\pm 20ppm$ BX: $\pm 25ppm$	$T_a = -20^\circ C$ to $+70^\circ C$ $T_a = -40^\circ C$ to $+85^\circ C$
		Current consumption	I_{OP}	10mA max.
Duty	t_w/t	40% to 60%		1/2 V_{DD} level
High output voltage	V_{OH}	$V_{DD} - 0.4V$ min.		$I_{OH} = -0.8mA$
Low output voltage	V_{OL}	0.4V max.		$I_{OL} = 3.2mA$
Output load condition	C_L	15pF max.		
Output rise time	t_{TLH}	8ns max.		20% → 80% V_{DD} level
Output fall time	t_{THL}			80% → 20% V_{DD} level
Oscillation start up time	t_{OSC}	4ms max.		Time at 4.75V to be 0 sec.
Aging	f_a	$\pm 5ppm/year$ max.	$\pm 2ppm/year$ max.	$T_a = 25^\circ C$
Shock resistance	S.R.	$\pm 10ppm$ max.	$\pm 2ppm$ max.	Three drops on a hard wooden board from 75 cm or excitation test with 3000G x 0.3ms x 1/2sine wave in 3 directions

■ External dimensions

(Unit: mm)



■ Recommended soldering pattern

(Unit: mm)

