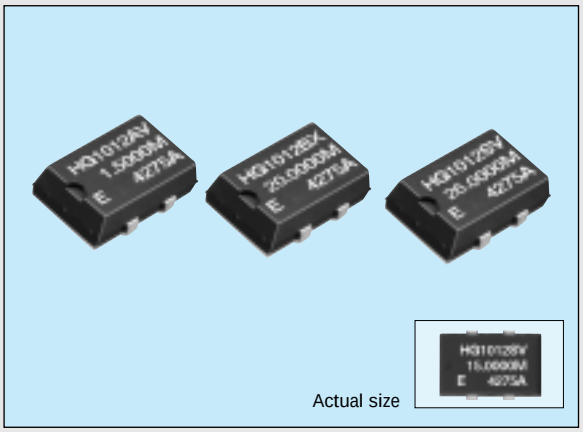
HIGH-STABILITY HIGH-FREQUENCY OSCILLATOR

HG-1000/2000 series

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

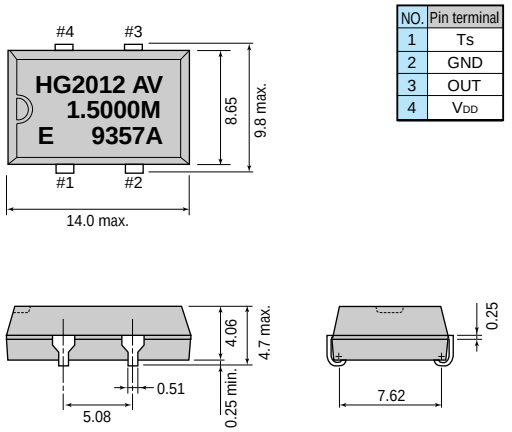


Specifications (characteristics)

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 ±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: ±20ppm, BV: ±25ppm	SV: ±15ppm, AV: ±20ppm	Ta= -20˚C to +70˚C
			BX: ±25ppm, CX: ±30ppm	BX: ±25ppm	Ta= -40˚C to +85˚C
Current consumption		Iop	10mA max.		No load condition
Duty		tw/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		fa	±5ppm/year max.	±2ppm/year max.	Ta=25˚C
Shock resistance		S.R.	±10ppm max.	±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)

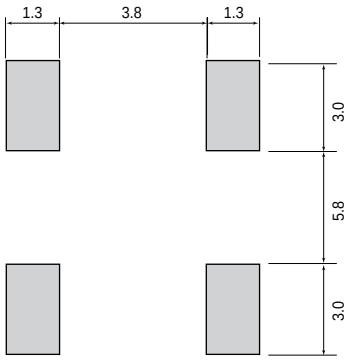


NO.	Pin terminal
1	Ts
2	GND
3	OUT
4	V_{DD}

Do not connect Ts-pin external device.

Recommended soldering pattern

(Unit: mm)



THE CRYSTALMASTER

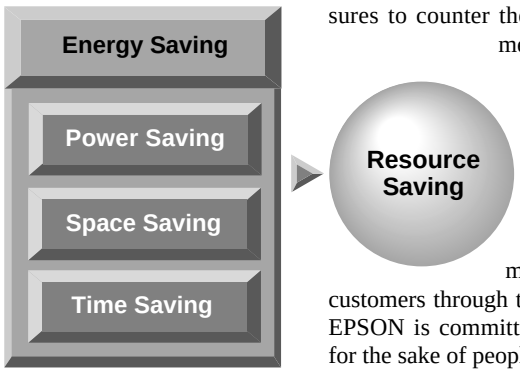
ENERGY SAVING EPSON

EPSON offers effective savings to its customers through a wide range of electronic devices, such as semiconductors, liquid crystal display (LCD) modules, and crystal devices. These savings are achieved through a sophisticated melding of three different efficiency technologies.

Power saving technology provides low power consumption at low voltages.

Space saving technology provides further reductions in product size and weight through super-precise processing and high-density assembly technology.

Time saving technology shortens the time required for design and development on the customer side and shortens delivery times.



Our concept of Energy Saving technology conserves resources by blending the essence of these three efficiency technologies. The essence of these technologies is represented in each of the products that we provide to our customers.

In the industrial sector, leading priorities include measures to counter the greenhouse effect by reducing CO2, measures to preserve the global environment, and the development of energy-efficient products. Environmental problems are of global concern, and although the contribution of energy-saving technology developed by EPSON may appear insignificant, we seek to contribute to the development of energy-saving products by our customers through the utilization of our electronic devices. EPSON is committed to the conservation of energy, both for the sake of people and of the planet on which we live.

SEIKO EPSON CORP. QUARTZ DEVICE DIVISION acquired ISO9001 and ISO14001 certification by B.V.Q.I. (Bureau Veritas Quality International) .

ISO9001 in October, 1992.

ISO14001 in November,1997.