

High Stability-High Frequency Crystal Oscillator

HG - 1012JA

- Reflowable and high density mounting type SMD.
- Using the heat-resisting type AT cut quartz crystal allows almost the same temperature soldering as universal SMD IC.
- Using C-MOS IC allows low current consumption and assures high reliability.
- Operating supply voltage : 5V.

■ Specifications

1. Absolute Maximum Ratings

Item	Symbol	Condition	MIN.	MAX.	Unit
Supply voltage	VDD	VDD-GND	- 0.5	+7.0	V
Storage temperature	TSTG		- 55	+125	°C
Soldering condition	TSOL	Under 260°C within 10 sec. × 2 times			

2. Operating Condition

Item	Symbol	Condition	MIN.	MAX.	Unit
Supply voltage	VDD	VDD-GND	4.75	5.25	V
Operable temperature	TOPR		- 40	+85	°C

3. Frequency Characteristics

Item	Symbol	Condition	Spec.	Unit
Frequency range	fo		1.5 to 28.63636	MHz
Frequency stability	$\Delta f/f_0$	VDD=5 ± 5% AV, BV : Ta=-20 to 70°C BX, CX : Ta=-40 to 85°C (Reference at 25°C)	AV : ± 20 MAX. BV : ± 25 MAX. BX : ± 25 MAX. CX : ± 30 MAX.	ppm
Aging	fa	Ta=25°C, 1st year	± 5 MAX.	ppm

Note: Please consult EPSON about standard frequency.

Frequency stability is including calibration tolerance, reflow soldering drift, operating temperature range (Ta), operating voltage range and load change (CL).

4. Electrical Characteristic

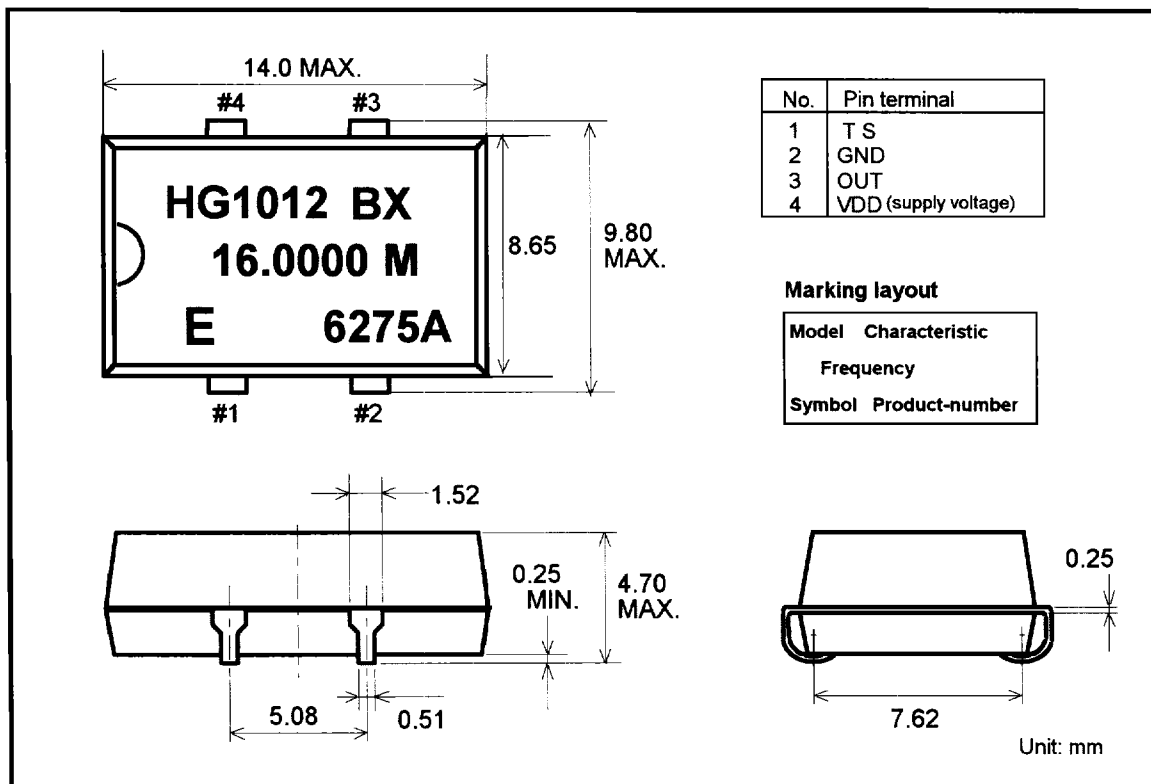
Item	Symbol	Condition	MIN.	MAX.	Unit
Supply current	IDD	VDD=5.0V, No load		10	mA
Start-up time	tosc	VDD=4.75V to be 0 sec.		4	ms

5. Output Characteristics

(VDD=5.0V, Ta=-40 to 85°C, CL=15pF)

Item	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Output load	CL				15	pF
Duty	Tw/T	1/2VDD level	40		60	%
Higt output voltage	VOH	IOH=-0.8mA	VDD-0.4			V
Low output voltage	VOL	IOL= 3.2mA			0.4	V
Output rise time	tLH	20%→80% VDD level		3	8	ns
Output fall time	tHL	80%→20% VDD level		3	8	ns

External Dimensions



Part Numbering Information

HG-1012JA - 16.000000 - BX

Part Name - Output Frequency(MHz) - Frequency Characteristics Code

Frequency Characteristics Code : Frequency stability rank(AV,BV,BX,CX)

Pin No.1 : TS pin. Do not connect to any terminals.