PSE Technology Corporation

SPECIFICATION FOR APPROVAL

CUSTOMER	
NOMINAL FREQUENCY	32.768 KHz
PRODUCT TYPE	**G2 Series Cylinder Through Hole Quartz Crystal**
SPEC. NO. (P/N)	G23270023
CUSTOMER P/N	
ISSUE DATE	Nov.6,2015
VERSION	A

APPROVED	PREPARED	QA
		
APPROVED BY CUSTOMER :		**AVL Status**
Please return one copy with approval to PSE-TW		

PSE Technology Corporation

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*RoHS Exception
*HF-Halogen Free
*REACH Compliant

*** *A company of PERICOM Semiconductor Corporation* ***

VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
A	Nov.6,2015			Initial Release	

G2 Series 2.0x6.0mm Cylinder Through Hole Quartz Crystal

G23270023

VER. A 4-Feb-10

ELECTRICAL SPECIFICATIONS

SRe Part Number : G23270023

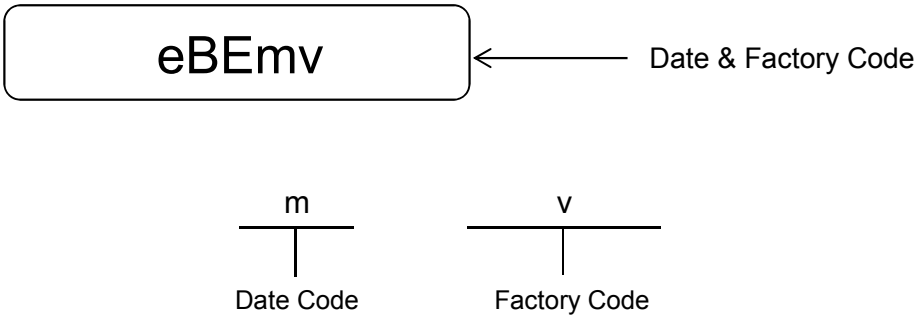
Parameters	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	32.768	KHz	
Mode of Oscillation	MO	Fundamental		+2° X-Cut
Drive Level	DL	1	µW	Max.
Load Capacitance	CL	12.5	pF	Typical
Frequency Tolerance	FT	±20	ppm	at 25℃ ± 5℃
Operating Temperature Range	TR	-10 to +60	°C	
Equivalent Series Resistance	ESR	35	KΩ	Max.
Shunt Capacitance C0	C0	1.5	pF	Typical
Temperature Coefficient	K	-0.04	ppm/°C^2	Max.
Aging		± 3	ppm	Max 1st year
Insulation Resistance		500	MΩ	at DC 100V ± 15V

Reliability (Mechanical and Environmental Endurance)

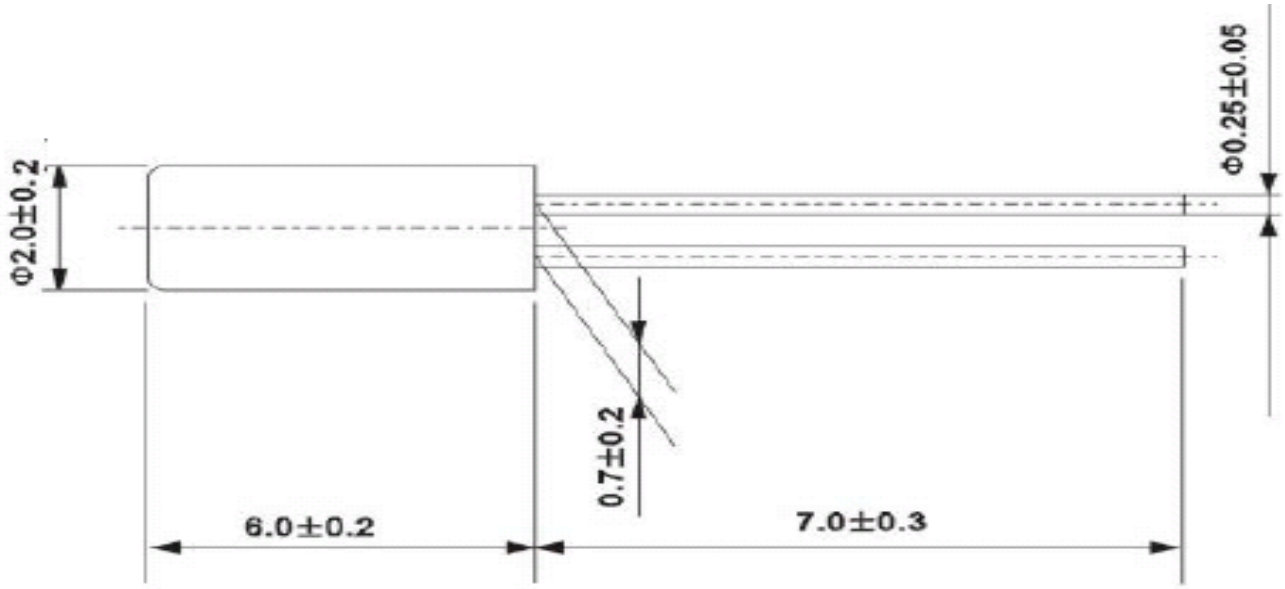
No.	Test Items	Test Method and Condition	Requirements
1	Vibration	(1) Vibration Frequency: 10 to 55Hz (2) Vibration Amplitude: 1.5mm (3) Cycle Time: 1-2min(10-55-10Hz) (4) Direction: X.Y.Z (5) Duration: 2h/each direction	Frequency Change: ±10ppm Max. Resistance Change:5kohm Max.
2	Shock	3 Times free drop from 75cm height to hard wooden board of thickness more than 30mm	Frequency Change: ±10ppm Max. Resistance Change:5kohm Max.
3	Leakage	Put crystal units into a hermetic container and Helium for 0.5-0.6Mpa, and keep it for 1h; Check the leakage by a Helium leak detector	Leakage: 1x10^{-8}Pa·m1/s Max.

4	Lead Strength (DIP)	The crystal lead with the 0.9kg(9N) power (keep it for 30s±5s) and bend the crystal lead 90° with 0.45kg power and two times	The crystal lead is not abnormity
5	High Temperature Endurance	The crystal units shall be put in somewhere for 2 hrs at temperature of 85℃±2℃, then keep it for 1 to 2 hrs under room temperature.	Frequency Change: ±10ppm Max. Resistance Change:5kohm Max.
6	Low Temperature Endurance	The crystal units shall be put in somewhere for 2 hrs at temperature of -25℃, then keep it for 1 to 2 hrs under room temperature.	
7	Humidity Endurance	The crystal units shall be put in somewhere at 40℃ in relative humidity of 90-95% for 48 hrs, then keep it for one or two hours under room temperature.	
8	Temperature Cycle	Temperature shift from low(-40℃) to high(100℃, keep 30 mins), satisfy high(100℃) to low(-40℃, keep 30 mins), then go up to room temperature for 5 cycles.	
10	Salt Spray Test	Put the crystal units in the salt spray room (salt density: 5%) at the temperature of 35℃ for 96 hrs. Then clean it with water and dry its surface.	The appearance shall has no abnormity and soldering is good. Frequency Change: ±10ppm Max. Resistance Change:5kohm Max.

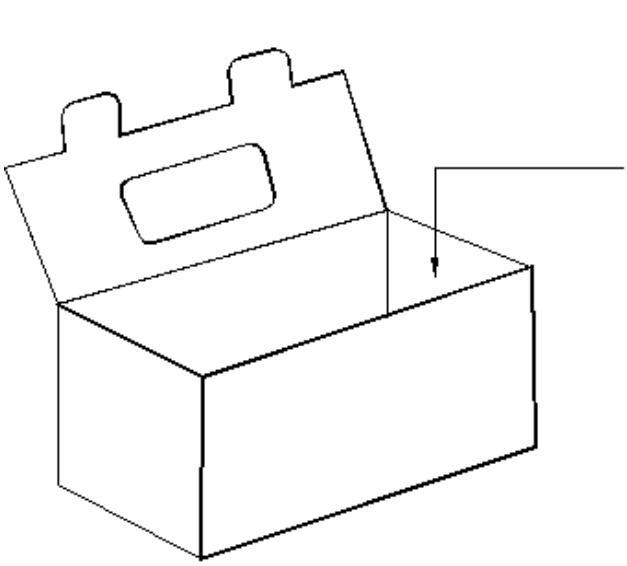
MARKING

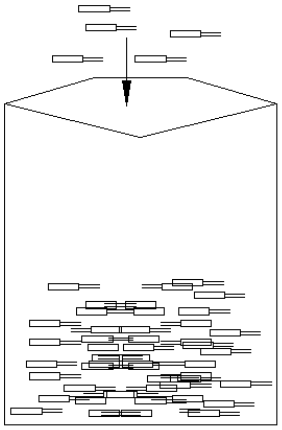


DIMENSIONS (Unit:mm)



PACKING





Quantity for Each Bag : 1000 pcs