

# PSE Technology Corporation

## SPECIFICATION FOR APPROVAL

CUSTOMER	_____
NOMINAL FREQUENCY	32.768 KHz
HOLDER TYPE	<b>TYPE G3 Cylinder SMD Quartz Crystal</b>
SPEC. NO. ( P/N )	G33270010
CUSTOMER P/N	_____
ISSUE DATE	Mar.2,2011
VERSION	A

APPROVED	PREPARED	QA
<i>Brenda</i>	<i>Niki Lu</i>	<i>Lillian</i>
<b>APPROVED BY CUSTOMER :</b>		<b>AVL Status</b>
<b>Please return one copy with approval to PSE-TW</b>		

### PSE Technology Corporation

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\*RoHS Exception  
 \*HF-Halogen Free  
 \*REACH Compliant

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

# TYPE G3 Cylinder SMD Quartz Crystal

**G33270010**

VER. A    2-Mar-11

## VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
A	Mar.2,2011			Initial Release	



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## ELECTRICAL SPECIFICATIONS

**SRe Part Number : G33270010**

Parameters	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	32.768	KHz	
Mode of Oscillation	MO	Fundamental		+2° X-Cut
Load Capacitance	CL	6	pF	Typical
Calibration Tolerance		± 20	ppm	at 25°C ± 5°C
Operating Temperature Range	TR	-10~60	°C	
Drive Level	DL	1	μW	Max.
Series Resonant Resistance	CI/RR	50	KΩ	Max.
Temperature Coefficient	K	-0.035	ppm/°C <sup>2</sup>	Typical
Aging		± 3	ppm	Max 1st year
Insulation Resistance		500	MΩ	at DC 100V ± 15V

## Reliability ( Mechanical and Environmental Endurance )

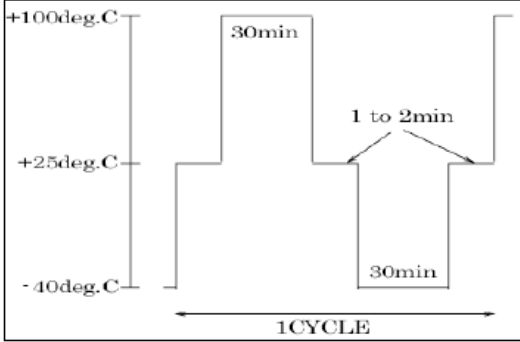
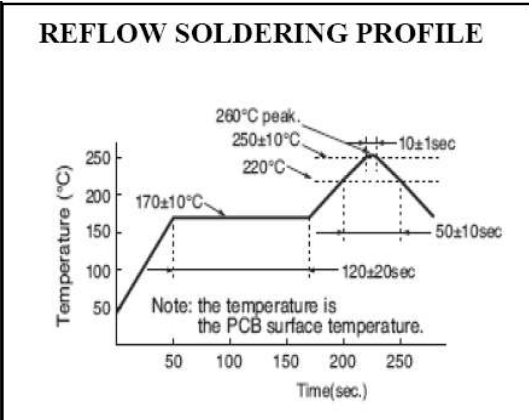
No.	Test Items	Test Method and Condition	Requirements
1	Vibration	(1) Vibration Frequency: 10 to 55Hz (2) Vibration Amplitude: 1.5mm (3) Cycle Time: 1-2min(10-55-10Hz) (4) Direction: X.Y.Z (5) Duration: 2h/each direction	Frequency Change: ±10ppm Max. Resistance Change: ±15% or 5kΩ Max.
2	Shock	3 Times free drop from 75cm height to hard wooden board of thickness more than 30mm	Frequency Change: ±10ppm Max. Resistance Change: ±15% or 5kΩ Max.
3	Hermetic seal	Checked: before the molded crystal units	less than $1 \times 10^{-7}$ mbar.l/sec.
4	High temperature	240 hours at +85°C ± 2°C After 1-2hours past at room temperature from following test.	Frequency Change: ±10ppm Max. Resistance Change: ±25% or 10kohm Max.



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5	Low temperature	240 hours at $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ After 1-2hours past at room temperature from following test.	Frequency Change: $\pm 10\text{ppm Max.}$ Resistance Change: $\pm 15\%$ or $5\text{kohm Max.}$
6	Humidity	240 hours at $+85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , relative humidity 90-95% After 1-2hours past at room temperature from following test.	Frequency Change: $\pm 10\text{ppm Max.}$ Resistance Change: $\pm 25\%$ or $10\text{kohm Max.}$
7	Temperature cycle	After supplying the following temperature cycle (50cycles) 	Frequency Change: $\pm 10\text{ppm Max.}$ Resistance Change: $\pm 25\%$ or $10\text{kohm Max.}$
8	Solderability	Dip the leads of crystal units into the solution (7-10%) of rosin $3 \pm 0.5\text{s}$ , then dip it into the tank 5-10s. Temperature of solder melted tank is $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$	The dipped surface of the leads should be at least 95% covered with continuous new solder coating
9	Reflow soldering	The REFLOW SOLDERING PROFILE of Fig.1 for TMXLi-206F families. 	After 24h past from frequency test, Frequency Change: $\pm 10\text{ppm Max.}$ Resistance Change: $\pm 25\%$ or $10\text{kohm Max.}$ Notice: 1 · Using the infrared lamp at soldering process may cause uneven temperature rise on plastic surface of the parts, so that please keep the package temperature within left conditions. 2 · DO NOT dip the plastic part into solder.

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## MARKING

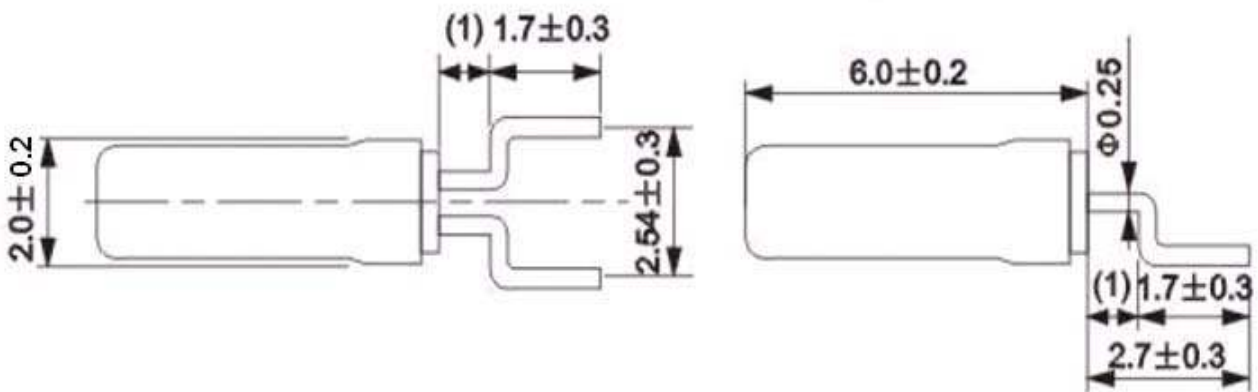
eBAmv

————— Date & Factory Code

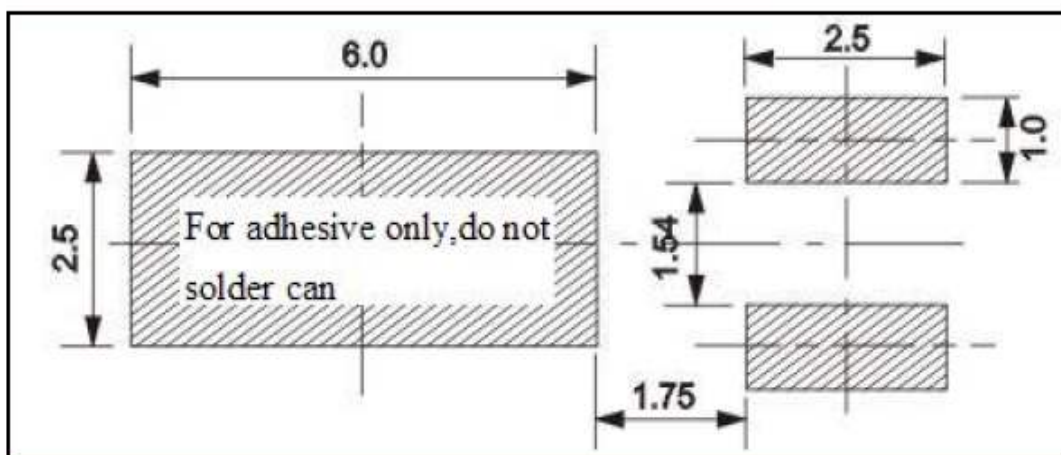
m  
|  
Date Code

v  
|  
Factory Code

## DIMENSIONS (Unit:mm)



## ■ SOLDER PATTERN

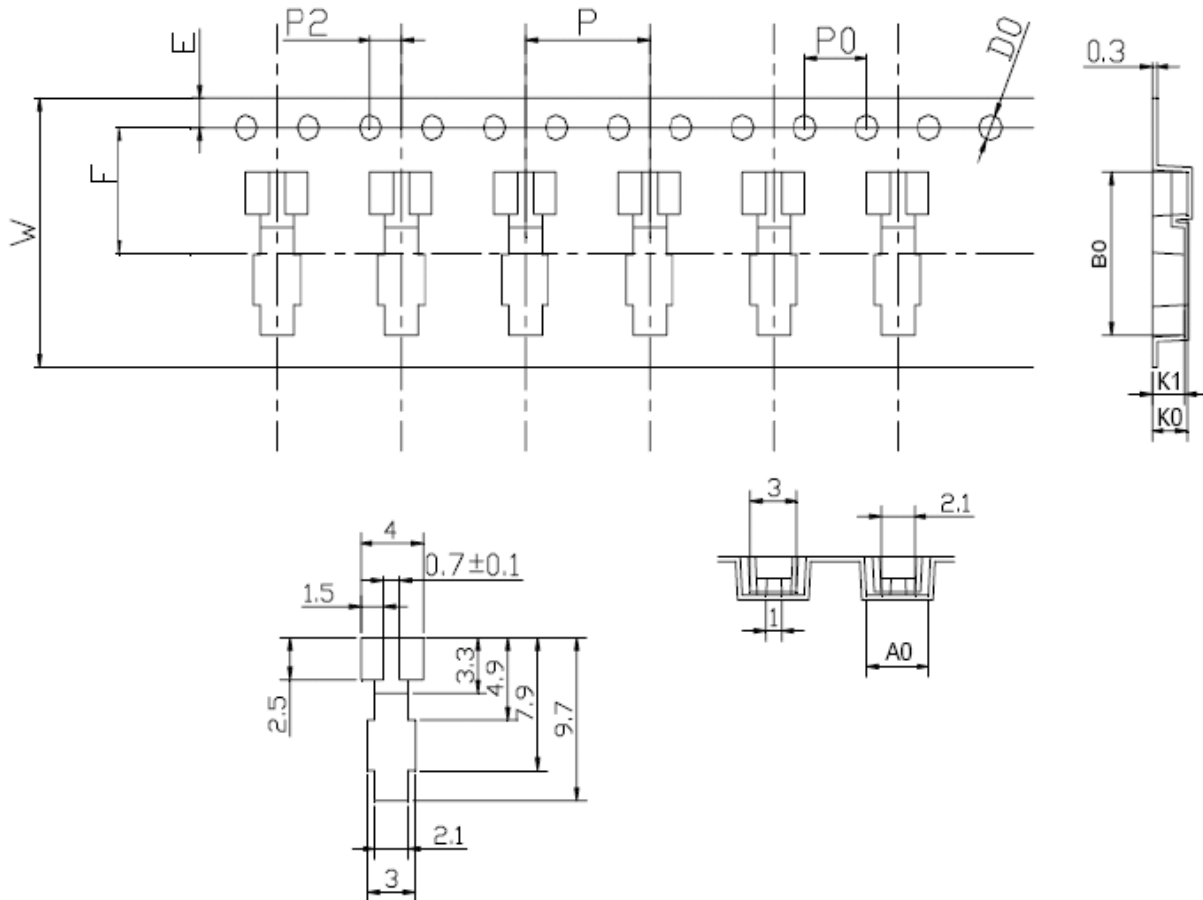


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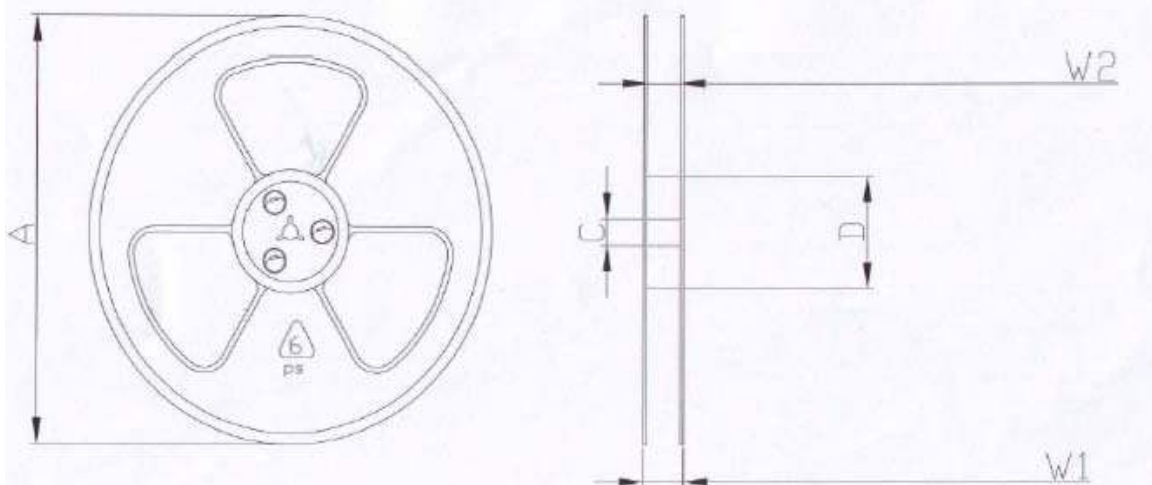
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## Packing



W	A0	B0	E	F	P	P0	P2	D0	K0	K1
16 <sup>+0.30</sup> <sub>-0.30</sub>	4.0 <sup>+0.10</sup> <sub>-0.10</sub>	9.7 <sup>+0.10</sup> <sub>-0.10</sub>	1.75 <sup>+0.10</sup> <sub>-0.10</sub>	7.5 <sup>+0.10</sup> <sub>-0.10</sub>	8 <sup>+0.10</sup> <sub>-0.10</sub>	4 <sup>+0.10</sup> <sub>-0.10</sub>	2 <sup>+0.15</sup> <sub>-0.15</sub>	1.5 <sup>+0.15</sup> <sub>-0.00</sub>	2.3 <sup>+0.10</sup> <sub>-0.10</sub>	2.1 <sup>+0.10</sup> <sub>-0.10</sub>



A±0.5	C±0.2	D±0.3	W1±0.2	W2 <sup>+0.4</sup> <sub>+0.2</sub>
330	25	100	20	16

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