



PSE Technology Corporation

SPECIFICATION FOR APPROVAL

| | |
|-------------------|---------------------------------------|
| CUSTOMER | |
| NOMINAL FREQUENCY | 20.000000 MHz |
| PRODUCT TYPE | TYPE GC 49S SMD QUARTZ CRYSTAL |
| PART NUMBER | GC2000032 |
| CUSTOMER P/N | |
| ISSUE DATE | February 24, 2011 |
| VERSION | A |

| APPROVED | PREPARED | QA |
|---|---|---|
|  |  |  |
| APPROVED BY CUSTOMER | | |
| Please return one copy with approval to PSE-TW | | |

PSE Technology Corporation

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*RoHS Compliant
 *HF-Halogen Free
 *REACH Compliant

A Company of PERICOM Semiconductor Corporation

TYPE GC 49S SMD QUARTZ CRYSTAL

GC2000032

VER.A 24-FEB-11

VERSION HISTORY

| Version No. | Version Date | Customer Receipt Date | Supplier Receipt Date | Description | Notes |
|-------------|---------------|-----------------------|-----------------------|-----------------|-------|
| A | Feb. 24, 2011 | | | Initial Release | |



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ELECTRICAL SPECIFICATIONS

| Item | Symbol | Specifications | Units | Notes |
|---|--------|--------------------|-------|------------------------------------|
| Nominal Frequency | Fn | 20.000000 | MHz | |
| Mode of Oscillation | MO | AT Cut-Fundamental | | |
| Calibration Load Capacitance | CL | 18 | pF | |
| Calibration Tolerance | FL | ± 30 | ppm | at 25°C±3°C |
| Operating Temperature Range | TR | -20 to +70 | °C | |
| Frequency Stability(Frequency Deviation over the Operating Temperature Range) | F/T | ± 30 | ppm | Reference to the Frequency at 25°C |
| Operating Drive Level | | 100 | μW | |
| Maximum Drive Level | | 500 | μW | |
| Equivalent Series Resistance | ESR | 30 | Ω | Max. |
| Shunt Capacitance | C0 | 7 | pF | Max. |
| Aging at 25°C | | ± 5 | ppm | Max, 1st year |
| Storage Temperature | | -55 to +125 | °C | |
| Insulation Resistance | | 500 | MΩ | Min |

** This product doesn't include harmful substance that stipulated by SONY SS-00259 Level 1 and S-AT2-001 Level 1 standard. RoHS Compliant (Pb - Free).

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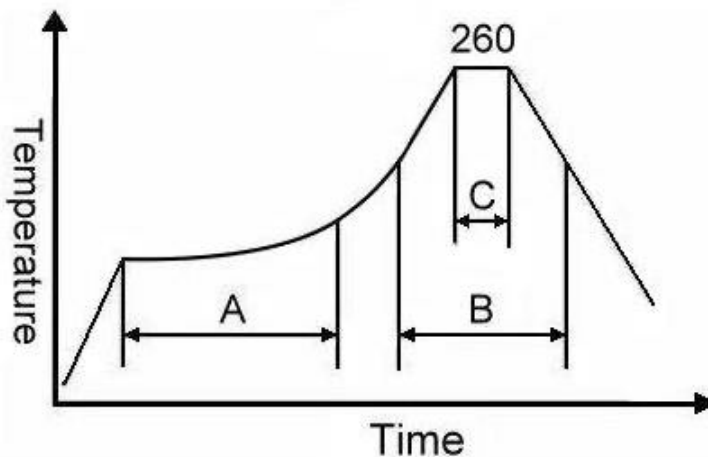
RELIABILITY SPECIFICATIONS

MECHANICAL AND ENVIRONMENTAL RATINGS:

- a) FINE LEAK TEST: JESD22-A109 (Condition 1A)
- b) GROSS LEAK TEST: JESD22-A109 (Condition C)
- c) MOISTURE RESISTANCE: JESD22-A113
- d) SHOCK: JESD22-B104 (Condition B)
- e) SOLDERABILITY : (RoHS version): J-STD-002
- f) VIBRATION: JESD22-B103
- g) SOLVENT RESISTANCE: JESD22-B107
- h) RESISTANCE TO SOLDERING HEAT (RoHS version): J-STD-020D Table 5.2 Pb free devices (3 cycles max)

SUGGESTED IR REFLOW PROFILE

*As per IPC-JEDEC J-STD-020D



Note:

| | Stage | Temperature | Time |
|---|--------------|-------------|------------|
| A | Preheat | 150~200°C | 60~120 Sec |
| B | Primary Heat | 217°C | 60~150 Sec |
| C | Peak | 260°C | 10 Sec |

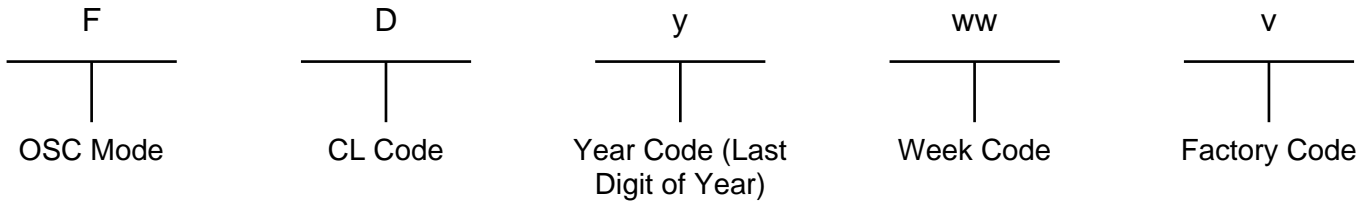
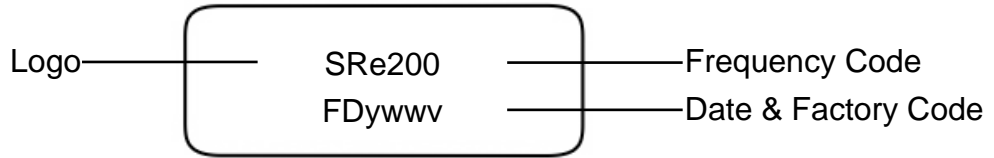
For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

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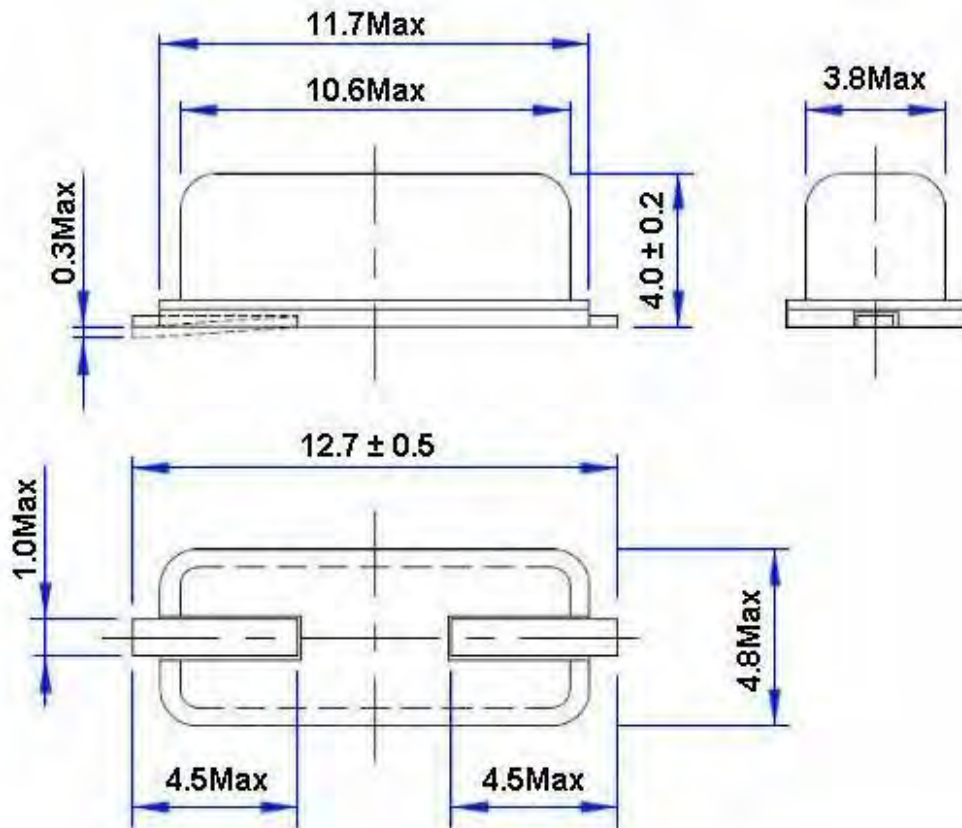
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MARKING



MECHANICAL DRAWINGS (Scale: None. Dimensions are in mm.)



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PACKING

