



A Product Line of  
Diodes Incorporated



## SPECIFICATION FOR APPROVAL

CUSTOMER \_\_\_\_\_

NOMINAL FREQUENCY 25.000000 MHz




PRODUCT TYPE **TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL**

SPEC. NO. ( P/N ) FL2500035

CUSTOMER P/N \_\_\_\_\_

ISSUE DATE December 3, 2017

VERSION D

| APPROVED  | PREPARED  | QA  |
|---|---|---|
|  |  |  |

### Diodes Incorporated

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<https://www.diodes.com>

- \*Pb-free
- \*RoHS Compliant
- \*HF-Halogen Free
- \*REACH Compliant



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## FL2500035

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### ELECTRICAL SPECIFICATIONS

| Item   | Symbol | Specifications     | Units | Notes                              |
|--|--------|--------------------|-------|------------------------------------|
| Nominal Frequency  | Fn     | 25.000000          | MHz   |                                    |
| Mode of Oscillation  | MO     | AT Cut-Fundamental |       |                                    |
| Calibration Load Capacitance   | CL     | 10                 | pF    |                                    |
| Calibration Tolerance  | FL     | ±30                | ppm   | at 25°C±3°C                        |
| Operating Temperature Range  | TR     | -40 to +85         | °C    |                                    |
| Frequency Stability<br>(Frequency Deviation over the<br>Operating Temperature Range) | F/T    | ±50                | ppm   | Reference to the Frequency at 25°C |
| Operating Drive Level  |        | 10                 | μW    |                                    |
| Maximum Drive Level  |        | 100                | μW    |                                    |
| Equivalent Series Resistance   | ESR    | 60                 | Ω     | Max                                |
| Shunt Capacitance  | C0     | 5                  | 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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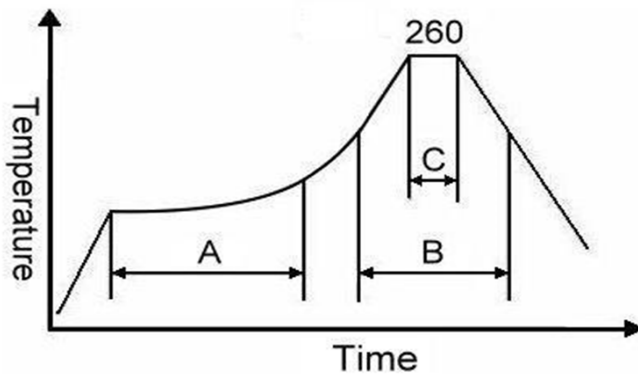
## RELIABILITY SPECIFICATIONS

### 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:

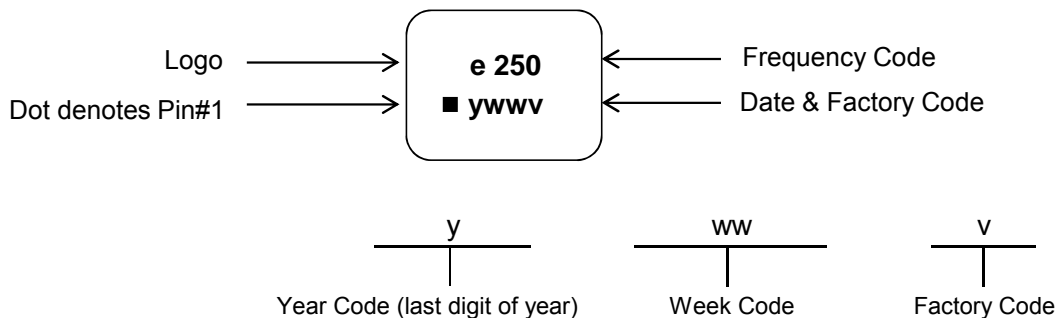
|   | Stage        | Temperature | Time       |
|---|--------------|-------------|------------|
| A | Preheat      | 150~200°C   | 60~120 Sec |
| B | Primary Heat | 217°C       | 60~150 Sec |
| C | Peak         | 260°C       | 10 Sec     |

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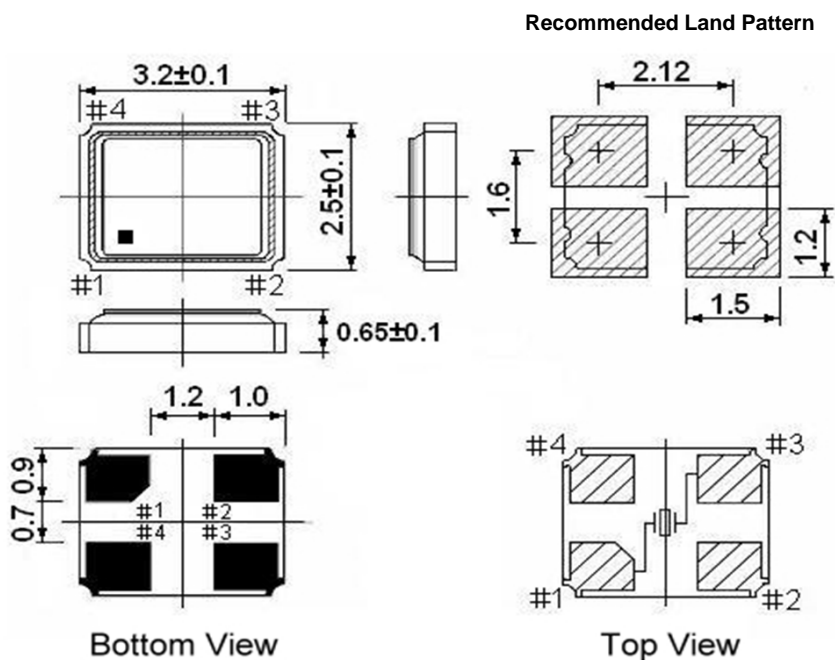
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## MARKING



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



**\*\* Recommended - Pin 1 & 3 : CRYSTAL  
Pin 2 & 4 : GND**

**Notes:**

1. Package drawings are for reference only, and the appearances of objects may vary.  
Actual packages are based on the real product.
2. The marking dot denotes Pin#1.
3. The position and shape of the chamfer pin may vary and are based on the real product.



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### PACKING

