



**THE DATASHEET OF  
ECS-327MVATX-2-CN-TR**



The ECS-327MVATX is a miniature SMD 32.768 kHz Oscillator with MultiVolt™ capability of 1.6 ~ 3.6 V. Available in 5 industry standard Packages the ECS-327MVATX is ideal for RTC, Low Power/Portable, Industrial, and IoT applications.

[Request a Sample](#)

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



- Low Current
- Extended Temp Range
- RoHS Compliant
- MultiVolt™ 1.6 ~ 3.6V Supply Voltage
- Tight Stability
- Compatible with 1.8V, 2.5V or 3.3V Power Supply

| PARAMETERS            | CONDITIONS                               | ECS-327MVATX |        |         | UNITS |
|-----------------------|--|--------------|--------|---------|-------|
|                       |  | MIN          | TYP    | MAX     |       |
| Frequency Range       |  |              | 32.768 |         | kHz   |
| * Frequency Stability | -40 ~ +85°C<br>(CN Opt)                  |              |        | ±25     | ppm   |
| Supply Voltage        |  | 1.6          |        | 3.6     | V     |
| Supply Current        |  |              |        | 200     | µA    |
| Output Load           | CMOS                                     |              |        | 15      | pF    |
| Output Voltage        | VOH                                      | 0.9 Vdd      |        |         | V     |
|                       | VOL                                      |              |        | 0.1 Vdd | V     |
| Tri-State Function    | "1" VIH ≥ 0.7* Vdd or **NC = Oscillation |              |        |         |       |
|                       | "0" VIL ≤ 0.3* Vdd = High Impedance      |              |        |         |       |
| Rise & Fall time      | 10% Vdd – 90% Vdd                        |              |        | 30      | ns    |
| Start Up Time         |  |              |        | 5       | mS    |
| Phase Jitter (RMS)    |  |              |        | 1       | pS    |
| Duty Cycle            | @ ½ Vdd                                  |              |        | 45/55   | %     |
| Standby Current       |  |              |        | 10      | µA    |
| Aging                 | @ +25°C                                  |              |        | ±3      | ppm   |
| Operating Temp*       | (N Opt)                                  | -40          |        | +85     | °C    |
| Storage Temp          |  | -55          |        | +125    | °C    |

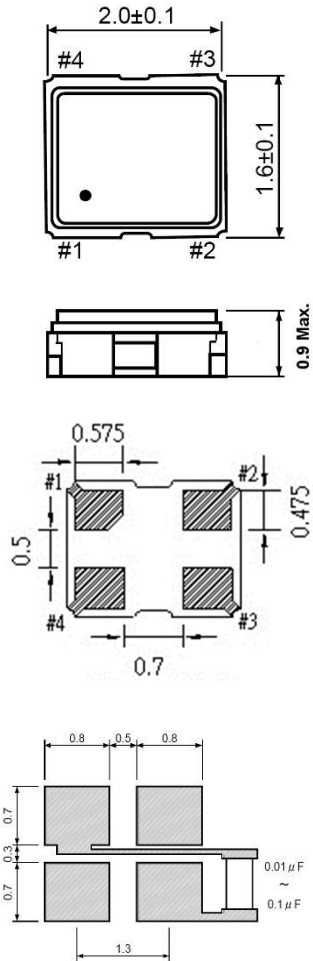
## PART NUMBERING GUIDE: Example ECS-327MVATX-2-CN-TR

| ECS | SERIES  | PACKAGE SIZE   | * STABILITY   | TEMP RANGE -  | PACKAGING                         |
|-----|---|--|---|---|-----------------------------------|
| ECS | 327MVATX<br>32.768 kHz<br>MultiVolt™ Oscillator | 1 = 2.0 x 1.6 mm<br>2 = 2.5 x 2.0 mm<br>3 = 3.2 x 2.5 mm<br>5 = 5.0 x 3.2 mm<br>7 = 7.0 x 5.0 mm | A = ±100 ppm<br>B = ±50 ppm<br>C = ±25 ppm<br>D = ±20 ppm | L = -10 ~ +70°C<br>M = -20 ~ +70°C<br>N = -40 ~ +85°C | -TR = 1K<br>-TR3 = 3K<br>Qty/Reel |

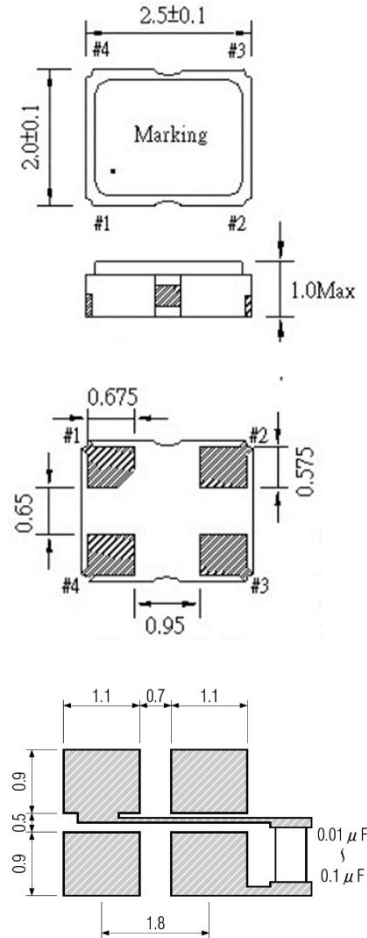
\* Frequency Stability includes initial tolerance, temperature, supply voltage and load change reflow frequency shift.

\*\* Internal pullup resistor allows active output if pin 1 is NC

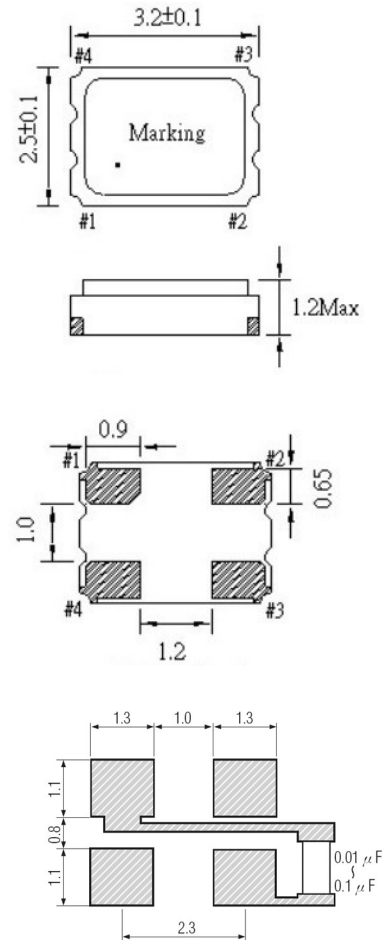
1 = 2.0 x 1.6 Package



2 = 2.5 x 2.0 Package



3 = 3.2 x 2.5 Package



**Figure 1)** Top, Side, Bottom views and Suggested Land

**Figure 2)** Top, Side, Bottom views and Suggested Land

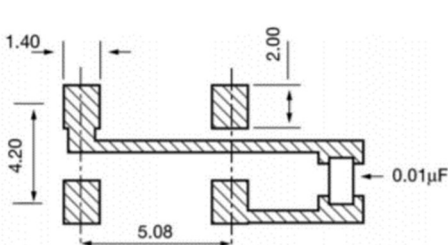
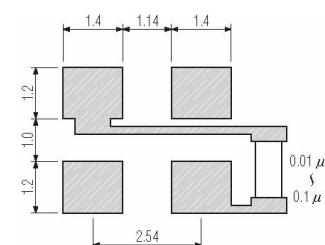
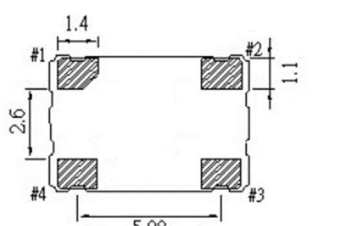
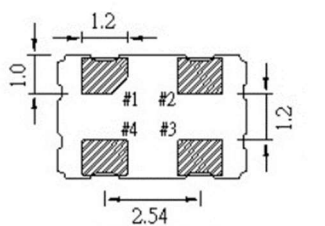
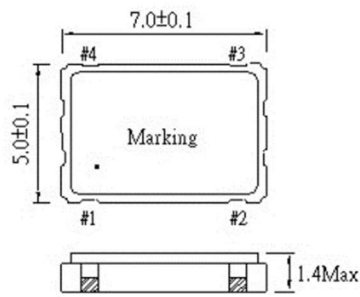
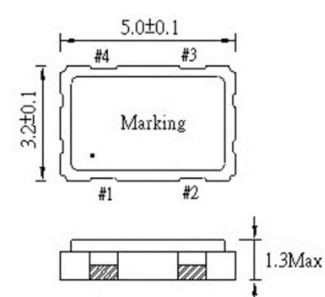
**Figure 3)** Top, Side, Bottom views and Suggested Land

**PAD CONNECTIONS**

|   |           |
|---|-----------|
| 1 | Tri-state |
| 2 | Gnd       |
| 3 | Output    |
| 4 | Vdd       |

5 = 5 x 3.2 Package

7 = 7 x 5 Package





**Figure 4)** Top, Side, Bottom views and Suggested Land

**Figure 5)** Top, Side, Bottom views and Suggested Land

| PAD CONNECTIONS |           |
|-----------------|-----------|
| 1               | Tri-state |
| 2               | Gnd       |
| 3               | Output    |
| 4               | Vdd       |

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View ECS-327MVATX-2-CN-TR on WIN SOURCE](#)
-  [ECS Inc. Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

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-  Cost Control Management
-  Shortage Management
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-  Excess Inventory Management