

## ECS-327SMO SMD Clock Oscillator

The ECS-327SMO oscillators utilizes the 32.768 KHz tuning fork crystal in a SMD ceramic package. It is designed specifically for wireless PCMCIA and portable communication equipment applications.

Request a Sample

## **OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS**

| ECS-3 | 327SMO |
|-------|--------|
|       |        |
|       |        |
|       |        |
|       |        |
|       |        |

- 2.0 mm Low Profile
- SMD Version
- Multi Volt (1.5 to 6V)
- RoHS Compliant

| Parameters            | Conditions                 | MIN       | TYP    | MAX       | Units |
|-----------------------|----------------------------|-----------|--------|-----------|-------|
| Output Frequency      |                            |           | 32.768 |           | KHz   |
| Frequency Stability   | -10 ~ +60°C                | -60       |        | +30       | PPM   |
|                       | -40 ~ +85°C                | -140      |        | +30       | PPM   |
| Operating Temperature |                            | -40       |        | +85       | °C    |
| Storage Temperature   |                            | -50       |        | +125      | °C    |
| Input Voltage Vcc     |                            | +1.5      | +3.3   | +6.0      | V DC  |
| Input Current         | With 15 pF load            |           | 8      | 15        | μA    |
| Symmetry              | @ ½ Vcc level and<br>+25°C | 45/55     |        | 55/45     | %     |
| Rise and Fall Time    |                            |           |        | 200       | ns    |
| "0" Level             |                            |           |        | Vcc x 0.1 |       |
| "1" Level             |                            | Vcc x 0.9 |        |           |       |
| Load                  | CMOS                       |           |        | 15        | pF    |
| Disable Delay Time    |                            |           |        | 150       | nS    |
| Startup Time          | VDD +3.3V at +25°C         |           | 220    | 500       | mS    |

<sup>\*</sup> Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock and vibration.

Part Number: ECS-327SMO-TR

| ECS | Series | Packaging                   |  |
|-----|--------|-----------------------------|--|
| ECS | 327SMO | TR = Tape & Reel<br>2K/Reel |  |



## **ECS-327SMO SMD Clock Oscillator**

## **Package Dimensions (mm)**

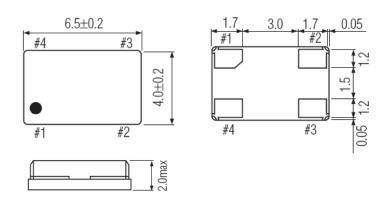


Figure 1) Top, Side, and Bottom views

| Pad Connections |                 |             |  |
|-----------------|-----------------|-------------|--|
| #1              | "L"             | Open or "H" |  |
| #2              | Ground          |             |  |
| #3              | Z Output        |             |  |
| #4              | V <sub>cc</sub> |             |  |

| Package Data     |         |  |
|------------------|---------|--|
| Cover            | Metal   |  |
| Base             | Ceramic |  |
| Terminal Plating | Gold    |  |



Figure 2) Land Pattern

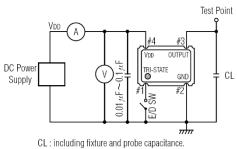


Figure 3) Test Circuit