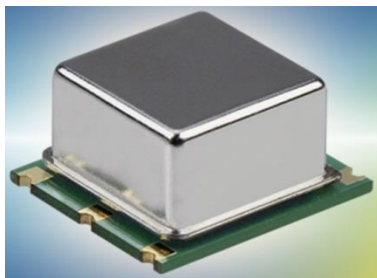


The ECOC-2522 is a SMD CMOS SC-Cut OCXO. The 25.4 x 22.0 x 12.2 mm SMD package is ideal for Cellular, Radar, Test & Measurement and IOT applications.

## ECOC-2522 SMD OCXO

ECOC-2522 OCXO



- SC Cut
- 25.4 x 22 mm Footprint
- Extended Temp Range
- RoHS Compliant

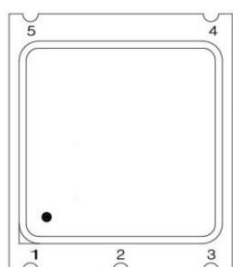
### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS            | CONDITIONS                                                  | ECOC-2522 |                    |                 | UNITS  |
|-----------------------|-------------------------------------------------------------|-----------|--------------------|-----------------|--------|
|                       |                                                             | MIN       | TYP                | MAX             |        |
| Frequency Range       |                                                             | 2.000     |                    | 100.000         | MHz    |
| Frequency Stability   | 0 ~ +50°C (F Opt)                                           |           |                    | ± 5.0           | ppb    |
|                       | -20 ~ +70°C (G Opt)                                         |           |                    | ± 10.0          | ppb    |
|                       | -40 ~ +75°C (H Opt)                                         |           |                    | ±30.0           | ppb    |
|                       | Supply Voltage ±5%                                          |           |                    | ±20.0           | ppb    |
|                       | Warm-Up @+25°C (≤ 3 minutes)                                |           |                    | ±100.0          | ppb    |
|                       | Load Change (±10%)                                          |           |                    | ±0.2            | ppm    |
| Power Consumption     | At turn on                                                  |           |                    | 3.6             | Watts  |
| Power Consumption     | Steady State                                                |           |                    | 1.4             | Watts  |
| Supply Voltage        | 3.3 Option                                                  | 3.135     | 3.3                | 3.465           | V      |
| Supply Voltage        | 5.0 Option                                                  | 4.75      | 5.0                | 5.25            | V      |
| Aging                 | Daily (after 30 days)                                       |           |                    | ±1.0            | ppb    |
|                       | Yearly                                                      |           |                    | ±100            | ppb    |
|                       | 10-Years                                                    |           |                    | ±500            | ppb    |
| Waveform              | CMOS                                                        |           |                    |                 |        |
| Output voltage Level  | VOL:10%V <sub>dd</sub> max./VOH:90%V <sub>dd</sub> min.V DC |           |                    |                 |        |
| Output Load           |                                                             |           | 15                 |                 | pF     |
| Rise & Fall time      | 10%V <sub>dd</sub> – 90%V <sub>dd</sub>                     |           |                    | 5               | ns     |
| Duty Cycle            | @ ½ V <sub>dd</sub>                                         |           |                    | 45/55           | %      |
| Waveform              | Sinewave                                                    |           |                    |                 |        |
| Peak Power            |                                                             | 2.0       |                    |                 | dBm    |
| Output Load           |                                                             |           | 50                 |                 | Ω      |
| Spurious Response     |                                                             |           |                    | -70             | dBc    |
| Phase Noise           | @ 10 MHz Carrier, V <sub>dd</sub> 3.3V                      |           |                    |                 |        |
| @ 1 Hz Offset         |                                                             |           |                    | -90             | dBc/Hz |
| @ 10 Hz Offset        |                                                             |           |                    | -120            | dBc/Hz |
| @ 100 Hz Offset       |                                                             |           |                    | -135            | dBc/Hz |
| @ 1,000 Hz Offset     |                                                             |           |                    | -145            | dBc/Hz |
| @ 10,000 Hz Offset    |                                                             |           |                    | -150            | dBc/Hz |
| @ 100 KHz Offset      |                                                             |           |                    | -150            | dBc/Hz |
| @ 1 MHz Offset        |                                                             |           |                    | -150            | dBc/Hz |
| Control Voltage Range | Positive Slope                                              | 0         | V <sub>dd</sub> /2 | V <sub>dd</sub> | V      |
| Frequency Pull Range  |                                                             | ±0.7      |                    |                 | ppm    |
| VC Port Impedance     |                                                             | 10        |                    |                 | kΩ     |
| Storage Temperature   |                                                             | -40       |                    | +100            | °C     |

**PART NUMBERING GUIDE: Example ECOC-2522-10.000-3-F-C**

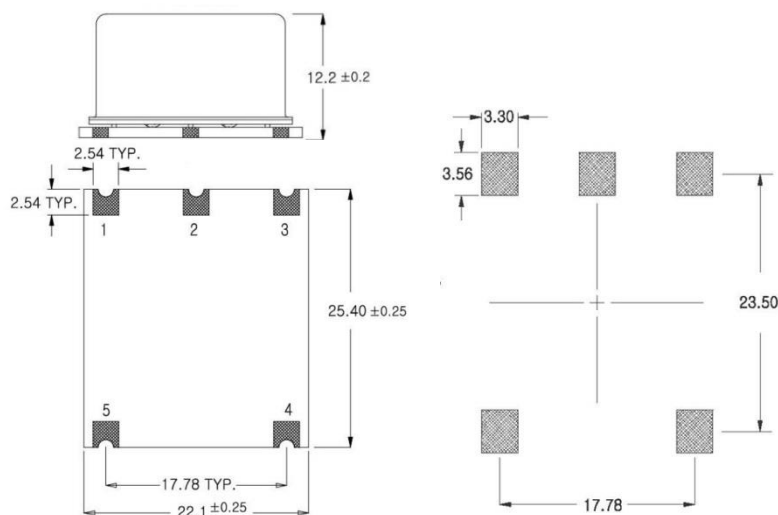
| ECOC - SERIES             | FREQUENCY  | VOLTAGE                | STABILITY /TEMP                                                            | OUTPUT                   |
|---------------------------|------------|------------------------|----------------------------------------------------------------------------|--------------------------|
| 2522<br>25.4 x 22 mm OCXO | 10.000 MHz | 3 = +3.3V<br>5 = +5.0V | F = ±5 ppb 0 ~ +50°C<br>G = ±10 ppb -20 ~ +70°C<br>H = ±30 ppb -40 ~ +75°C | C = CMOS<br>S = Sinewave |

**DIMENSIONS (mm)**



| PAD CONNECTIONS |                 |
|-----------------|-----------------|
| 1               | Voltage Control |
| 2               | V Ref           |
| 3               | Supply Voltage  |
| 4               | Output          |
| 5               | Ground          |

| FREQUENCY MHz |
|---------------|
| 10.000        |
| 12.800        |
| 13.000        |
| 16.384        |
| 20.000        |
| 38.400        |
| 38.800        |
| 40.000        |
| 100.000       |



| SOLDER PROFILE                          |
|-----------------------------------------|
| Peak solder Temp +260°C Max 10 sec Max. |
| 2 Cycles Max.                           |
| MSL 1, Lead Finish Au                   |

**Figure 1)** Top, Side, Bottom and suggested Land pattern.