



The miniature ECS-2520S is a miniature SMD HCMOS Tight Stability Crystal Oscillator. The 2.5 x 2.0 x 0.9 mm ceramic package is ideal for wireless and IOT application where stability is critical.

ECS-2520S SMD CRYSTAL OSCILLATOR



- Low Profile
- 2.5 x 2.0 mm Footprint
- Extended Temp Range
- RoHS Compliant

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | ECS-2520S | | | UNITS |
|-----------------------|-------------------------------------|------------------------|------|--------|--------|
| | | MIN | TYP | MAX | |
| Frequency Range | | 3.200 | | 55.000 | MHz |
| Frequency Stability * | EN (-40 ~ +85°C) | | | ± 15 | ppm |
| | FN (-40 ~ +85°C) | | | ± 10 | ppm |
| Power Supply | Vdd ±10% | +1.8, +2.5, +3.0, +3.3 | | | V DC |
| Current Consumption | | | | 7 | mA |
| Standby Current | | | | 10 | µA |
| Output | HCMOS | | 15 | | pF |
| Output voltage Level | VOL:10%Vdd max./VOH:90%Vdd min.V DC | | | | |
| Rise & Fall time | 10%Vdd – 90%Vdd | | | 5 | ns |
| Duty Cycle | @ ½ Vdd | | | 45/55 | % |
| Phase Noise | @ 10 KHz offset | | -145 | | dBc/Hz |
| Operating Temp | | -40 | | +85 | °C |
| Storage Temp | | -55 | | +125 | °C |

DIMENSIONS (mm)

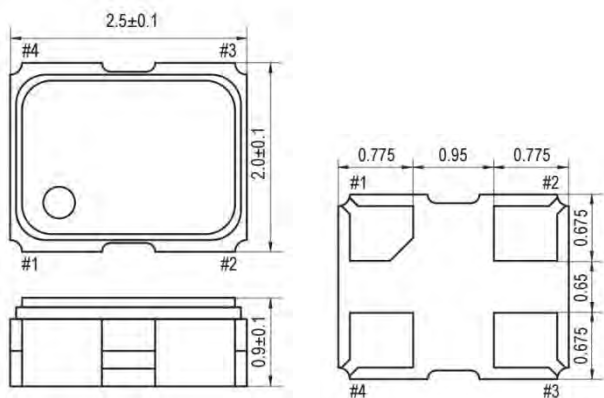


Figure 1) Top, Side, and Bottom views

* Frequency Stability includes initial tolerance, temperature, supply voltage & load change reflow frequency shift, aging (1 year @+25°C).

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

| Tri State Function | |
|--------------------|----------------|
| Pin 1 | Output |
| High or NC | Active |
| Low | High Impedance |

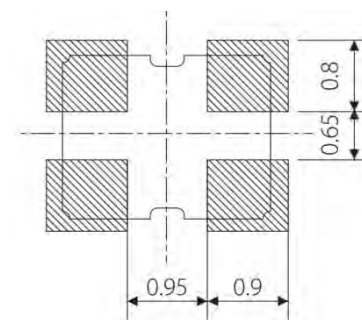


Figure 2) Suggested Land Pattern

PART NUMBERING GUIDE: Example ECS-2520S33-250-EN-TR