



**THE DATASHEET OF
ECS-2520S25-160-EN-TR**



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.

[Request a Sample](#)

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



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

| 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 |
| Startup Time | | | | 10 | ms |
| 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)

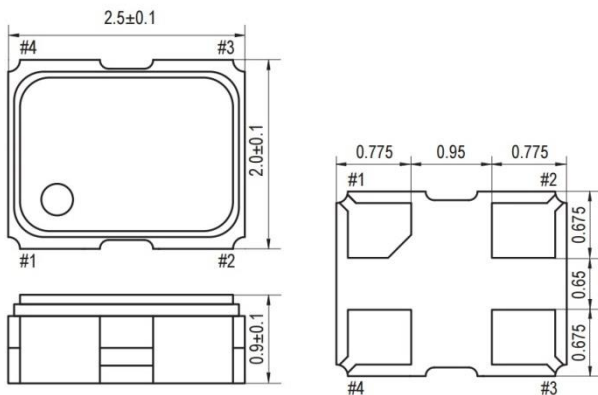


Figure 1) Top, Side, and Bottom views

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

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

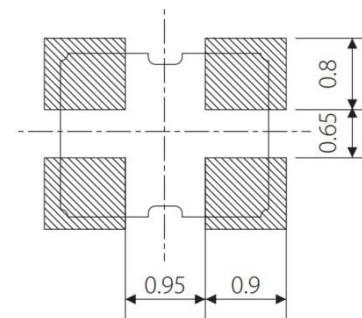


Figure 2) Suggested Land Pattern

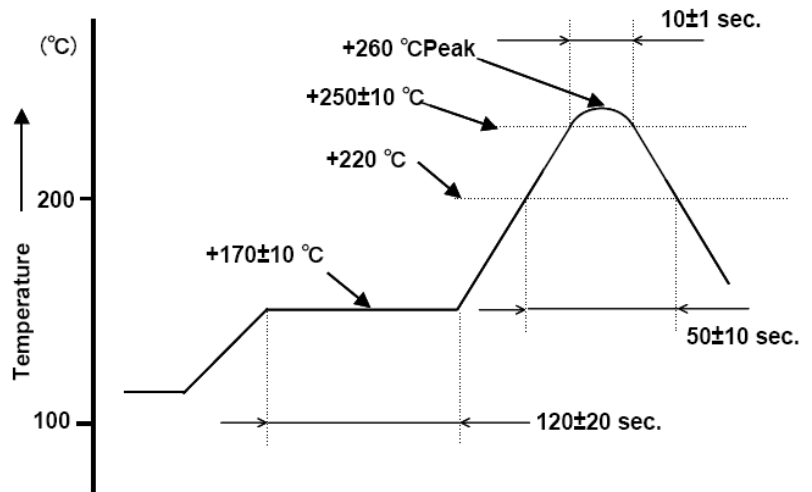
PART NUMBERING GUIDE: Example ECS-2520S33-250-EN-TR

| ECS - SERIES | Voltage | FREQUENCY ABBREVIATION | STABILITY | TEMP RANGE | PACKAGING |
|-----------------------|--|---|-----------------------------|-----------------|--------------------------------|
| 2520S 2.5 x 2.0 mm | 18 = +1.8V 25 = +2.5V 30 = +3.0V 33 = +3.3V | 250 = 25.000 MHz See Developed Frequencies Pg.2 | E = ±15 ppm F = ± 10 ppm | N = -40 ~ +85°C | TR = Tape & Reel 1K/Reel |

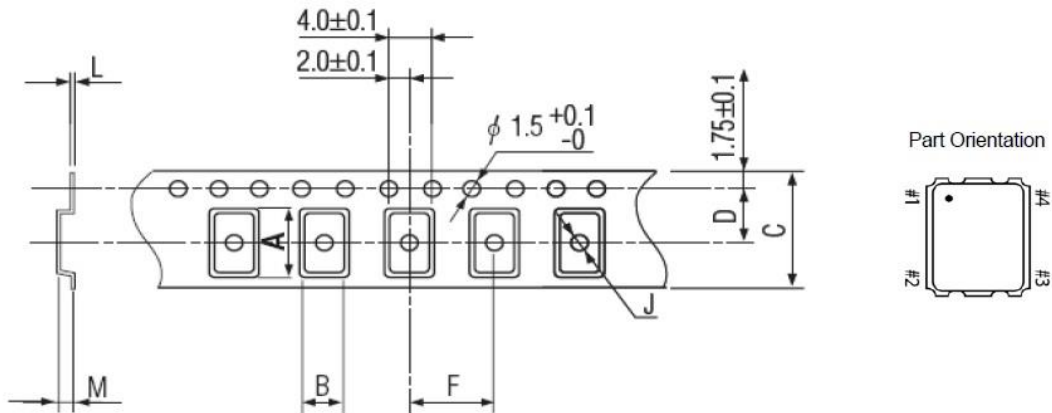
FREQUENCY ABBREVIATIONS

| FREQUENCY MHz | CODE |
|---------------|------|
| 5.000 | 050 |
| 10.000 | 100 |
| 12.000 | 120 |
| 16.000 | 160 |
| 20.000 | 200 |
| 24.000 | 240 |
| 25.000 | 250 |
| 26.000 | 260 |
| 32.000 | 320 |
| 40.000 | 400 |
| 44.000 | 440 |
| 50.000 | 500 |

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



POCKET TAPE DIMENSIONS (mm)



| A | B | C | D | F | J | L | M | Reel Dia. | Qty/Reel |
|-----|-----|-----|-----|-----|-----|------|-----|-----------|----------|
| 2.8 | 2.3 | 8.0 | 3.5 | 4.0 | 1.0 | 0.25 | 1.1 | 180 | 1000pcs |

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View ECS-2520S25-160-EN-TR on WIN SOURCE](#)
- ⊖ [ECS Inc. Information](#)

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- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
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