

**SERIES CP2520**

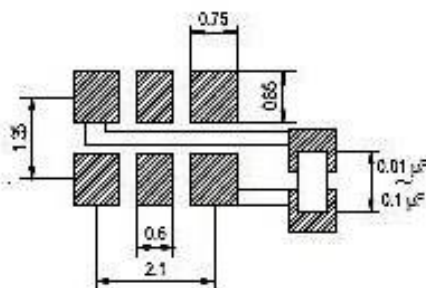
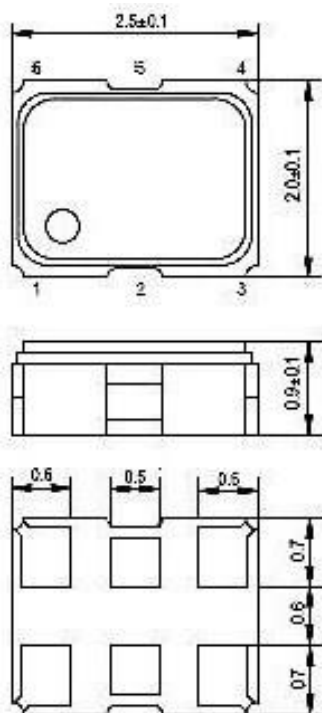


■ **ELECTRICAL SPECIFICATION**

| PARAMETER                         |                  | VALUE  |
|-----------------------------------|------------------|--|
| Frequency Range                   |                  | 6.000 ~ 175.000 MHz  |
| Operating Temperature Range       |                  | -20°C ~ +70°C Standard<br>-40°C ~ +85°C Extended   |
| Frequency Stability               |                  | ±20 ppm, ±25 ppm, ±50 ppm, ±100ppm   |
| Aging, 1 <sup>st</sup> Year       |                  | ±5 ppm max   |
| Storage Temperature Range         |                  | -55°C to +125°C  |
| Supply Voltage (Vcc)              |                  | 1.8 V, 2.5 V, 3.3 V  |
| Supply Current                    |                  | 40 mA max  |
| Output<br>LVPECL                  | Symmetry         | 40% to 60% at 50% Wave form (45% to 55% Available)   |
|                                   | Rise / Fall Time | 0.4 ns max at 10% to 90% Vdd   |
|                                   | Logic "0" Level  | V <sub>OL</sub> =0.9V min  |
|                                   | Logic "1" Level  | V <sub>OH</sub> =1.6 max   |
|                                   | Load             | 50 Ω (to V <sub>CC</sub> -2 V)   |
| Enable / Disable Function         |                  | Pin 1: High or Open / Output enabled (Pins 4 & 5)<br>Pin 1: Low / Output disabled (High impedance) |
| Phase Noise                       |                  | -153dBc/Hz, Typical @ 100kHz offset  |
| RMS Phase Jitter (12kHz ~ 20 MHz) |                  | 0.5 ps max   |

**SERIES CP2520**

■ **MECHANICAL SPECIFICATION**



Recommended Soldering Pattern

OUTLINE TOLERANCE  
IF NOT SPECIFIED:  
±0.015" / 0.4mm

PIN FUNCTIONS:  
[1] ENABLE / DISABLE  
[2] NC  
[3] GND  
[4] OUTPUT  
[5] COMPLEMENTARY OUTPUT  
[6] VCC

■ **PART NUMBERING SYSTEM**

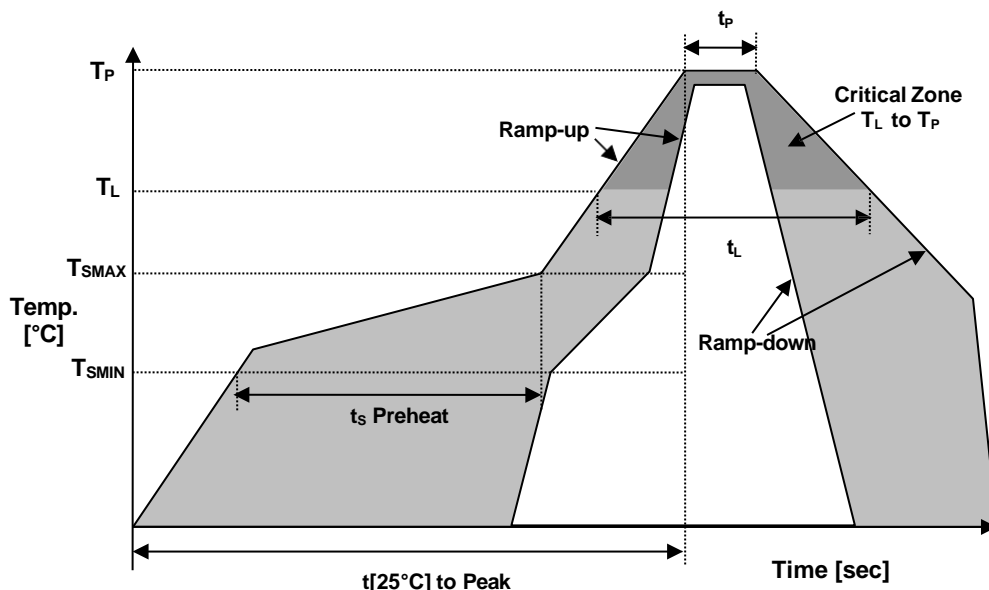
| TYPE                      | SERIES | - | FREQUENCY<br>(MHz)     | - | SUPPLY<br>VOLTAGE<br>(Vcc)                        | - | STABILITY<br>(ppm)                                       | - | TEMPERATURE<br>RANGE (°C)                  | - | SYMMETRY<br>(Duty Cycle)         | - | TAPE<br>&<br>REEL |
|---------------------------|--------|---|------------------------|---|---|---|--|---|--|---|----------------------------------|---|-------------------|
| Clock<br>Oscillator<br>CP | 2520   | - | 6.000 ~<br>175.000 MHz | - | *<br>1.8: Vcc=1.8<br>2.5: Vcc=2.5<br>3.3: Vcc=3.3 | - | 20: ±20 ppm<br>25: ±25 ppm<br>30: ±30 ppm<br>50: ±50 ppm | - | blank: -20°C to +70°C<br>X: -40°C to +85°C | - | blank: 40 to 60%<br>T: 45 to 55% | - | TR                |

\*Other ranges available. Please contact factory.

**EXAMPLE: CP2520-40.000-3.3-25-X-T-TR**

Surface Mount CP2520 LVPECL Oscillator, 2.5 x 2.0 mm, 40.000 MHz, 3.3 VDC Supply Voltage, ±25 ppm Stability from -40°C to +85°C, Symmetry 45% to 55%, Tape and Reel Packaging.

#### REFLOW PROFILE



| Reflow profile                                 |                                       |              |
|--|---------------------------------------|--------------|
| Temperature Min Preheat                        | $T_{SMIN}$                            | 150°C        |
| Temperature Max Preheat                        | $T_{SMAX}$                            | 200°C        |
| Time ( $T_{SMIN}$ to $T_{SMAX}$ )              | $t_s$                                 | 60-180 sec.  |
| Temperature                                    | $T_L$                                 | 217°C        |
| Peak Temperature                               | $T_P$                                 | 260°C        |
| Ramp-up rate                                   | $R_{UP}$                              | 3°C/sec max. |
| Ramp-down rate                                 | $R_{DOWN}$                            | 6°C/sec max. |
| Time within 5°C of Peak Temperature            | $t_p$                                 | 10 sec.      |
| Time $t[25^\circ\text{C}]$ to Peak Temperature | $t[25^\circ\text{C}] \text{ to Peak}$ | 480 sec.     |
| Time   | $t_L$                                 | 60-150 sec.  |

#### ENVIRONMENTAL

| PARAMETER                  | VALUE     |
|----------------------------|-----------|
| MOISTURE SENSITIVITY LEVEL | 1         |
| REACH SVHC                 | COMPLIANT |
| RoHS                       | COMPLIANT |
| TERMINATION FINISH         | Au        |



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