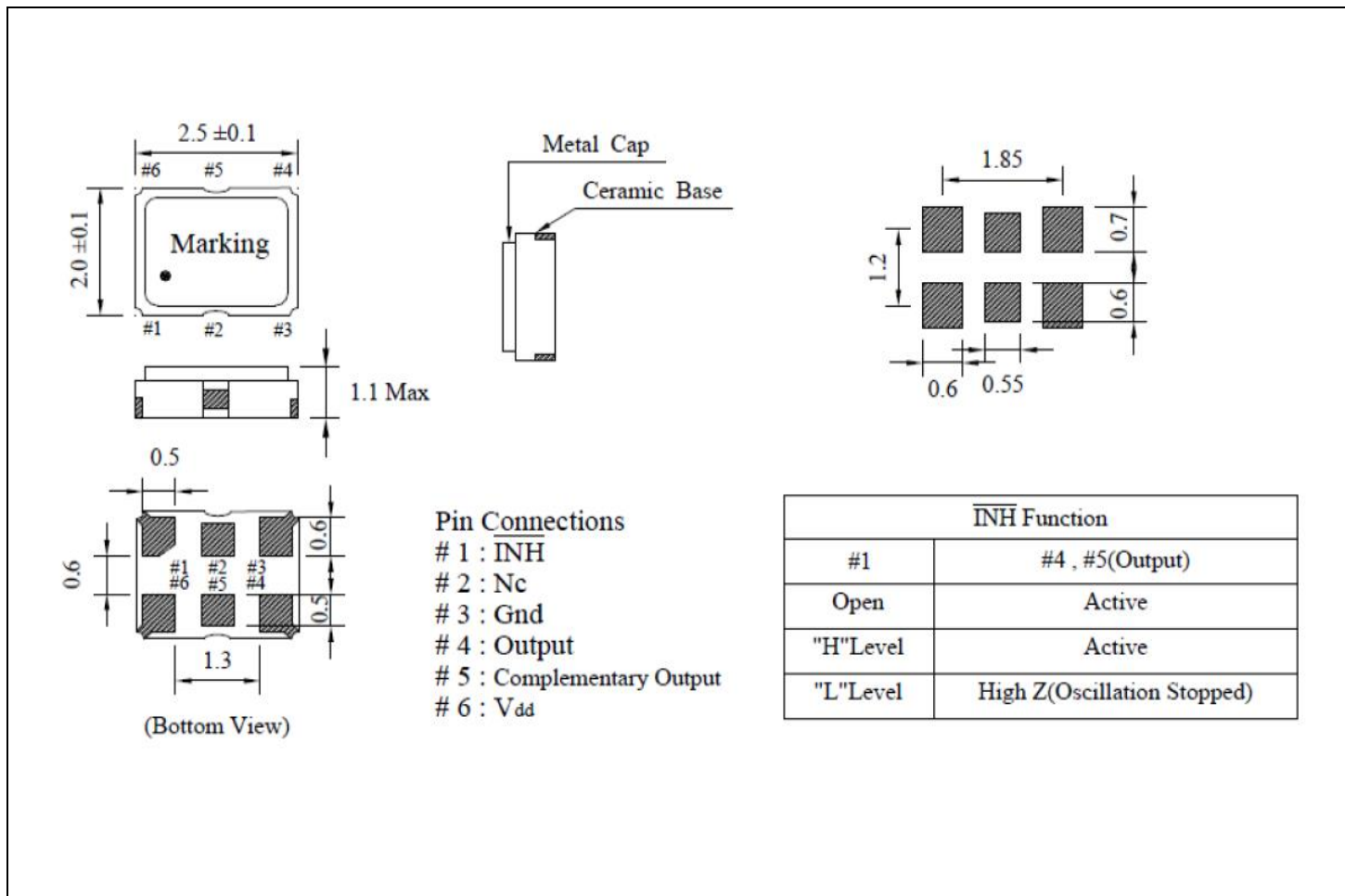




■ ELECTRICAL SPECIFICATION

| PARAMETER                            |                  | VALUE                                                                                              |
|--------------------------------------|------------------|----------------------------------------------------------------------------------------------------|
| Frequency Range                      |                  | 13.500 ~ 69.500 MHz                                                                                |
| Operating Temperature Range          |                  | -20°C ~ +70°C Standard<br>-40°C ~ +85°C X<br>-40°C ~ +125°C X1                                     |
| Frequency Stability                  |                  | ±20 ppm, ±25 ppm, ±30 ppm, ±50 ppm, ±100ppm                                                        |
| Aging, 1 <sup>st</sup> Year          |                  | ±3 ppm max                                                                                         |
| Storage Temperature Range            |                  | -55°C to +125°C                                                                                    |
| Supply Voltage (Vcc)                 |                  | 2.5 V, 3.3 V                                                                                       |
| Supply Current                       |                  | 35 mA max                                                                                          |
| Output<br>LVPECL                     | Symmetry         | 45% to 55% at 50% Wave form                                                                        |
|                                      | Rise / Fall Time | 0.5 ns max at 20% to 80% Vdd                                                                       |
|                                      | Logic "0" Level  | V <sub>OH</sub> =1.60 max                                                                          |
|                                      | Logic "1" Level  | V <sub>OL</sub> =0.90 min                                                                          |
|                                      | 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) |
| Output Swing                         |                  | 0.25 V min                                                                                         |
| Stand By Current                     |                  | 10 μA max                                                                                          |
| Start up Time                        |                  | 10 ms max                                                                                          |
| Output Enable Time                   |                  | 10 ms max                                                                                          |
| Output Disable Time                  |                  | 0.2 μs max                                                                                         |
| Phase Noise                          | @50MHz 1.8V      | -146.43 dBc/Hz, Typical @ 100kHz offset                                                            |
| RMS Phase Jitter<br>(12kHz ~ 20 MHz) |                  | 362.3 fs typ                                                                                       |

■ **MECHANICAL SPECIFICATION**



■ **PART NUMBERING SYSTEM**

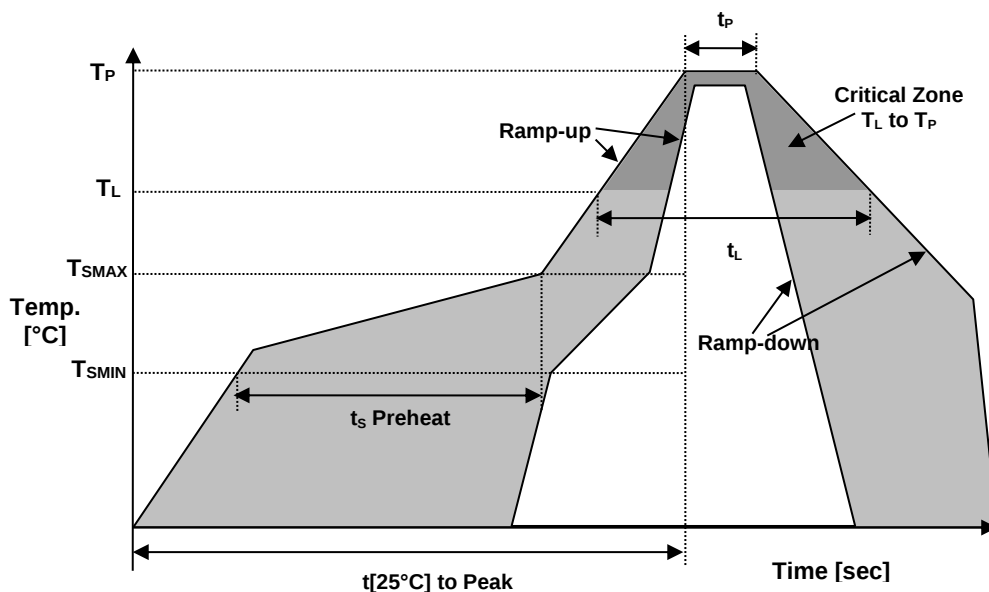
| TYPE                 | SERIES | - | FREQUENCY (MHz)     | - | SUPPLY VOLTAGE (Vcc)                         | - | STABILITY (ppm)                                                           | - | TEMPERATURE RANGE (°C)                                            | - | SYMMETRY (Duty Cycle) | - | TAPE & REEL |
|----------------------|--------|---|---------------------|---|----------------------------------------------|---|---------------------------------------------------------------------------|---|-------------------------------------------------------------------|---|-----------------------|---|-------------|
| Clock Oscillator CLF | 2520   | - | 13.500 ~ 69.500 MHz | - | 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<br>100: ±100 ppm | - | blank: -20°C to +70°C<br>X: -40°C to +85°C<br>X1: -40°C to +105°C | - | T: 45 to 55%          | - | TR          |

\*Other ranges available. Please contact factory.

**EXAMPLE: CLF2520-40.000-3.3-25-X-T-TR**

Surface Mount CLF2520 LVDS 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 | $t[25^\circ\text{C}]$ 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        |

