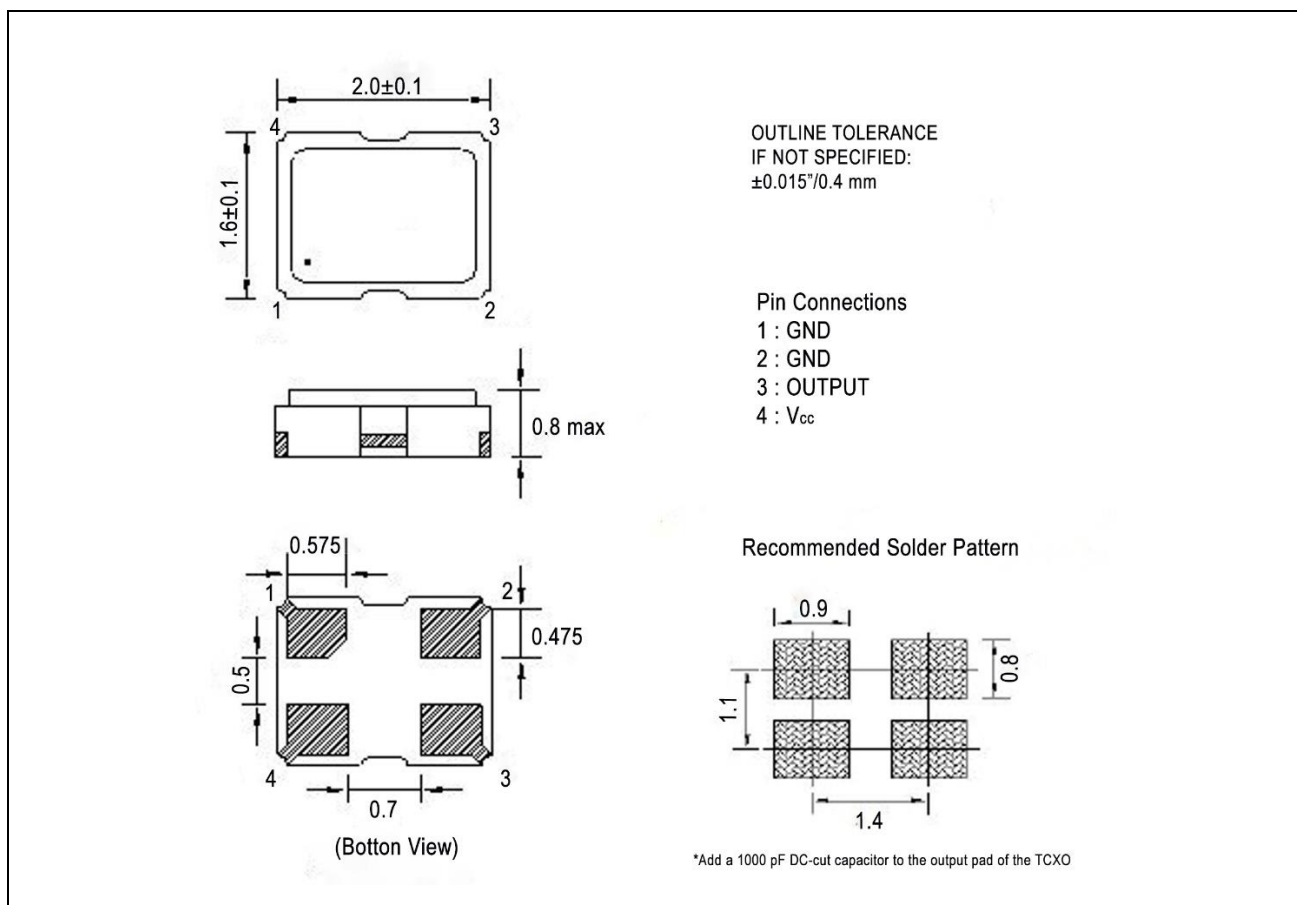


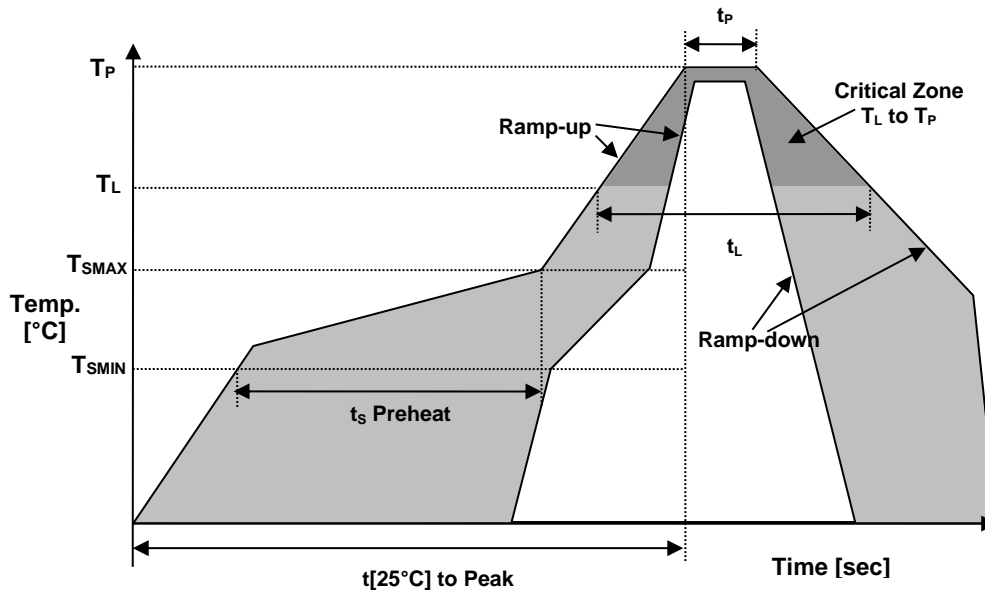
ELECTRICAL SPECIFICATION

| PARAMETER | SYMBOL | CONDITIONS | VALUE | UNIT |
|--|---|---------------------------------------|-----------|-----------|
| Nominal Frequency | f_0 | $V_{CC} \pm 5\%$ | 52.000 | MHz |
| Supply Voltage, nom. | V_{CC} | $V_{CC} \pm 10\%$ | 2.8 | VDC |
| Supply Current, max | I_S | $V_{CC} \pm 5\%$ | 3.0 | mA |
| Operating Temperature Range | T_a | | -40 ~ +85 | °C |
| Storage Temperature Range | $T(stg)$ | Absolute max | -40 ~ +85 | °C |
| Frequency Stability vs. Temperature | $\Delta f/f_0(T_a)$ | Reference to +25°C ±2°C (-30 ~ +85°C) | ±1.0 | Ppm |
| | | Reference to +25°C ±2°C (-40 ~ -30°C) | ±2.0 | ppm |
| Frequency Stability vs. Supply Voltage vs. Load vs. Aging max | $\Delta f/f_0$ $\Delta f/f_L$ $\Delta f/f_0(\text{year})$ | $V_{CC} \pm 5\%$ | ±0.2 | ppm |
| | | Load ±10% | ±0.2 | ppm |
| | | Per Year at +25°C ± 2°C | ±1.0 | ppm |
| Initial Frequency Calibration, Max | | Measured at 25°C, after 2 reflows | ±2.0 | ppm |
| Start Up Time | | | 5 | ms |
| Output Level, Clipped Sine Wave | | 10kΩ // 10 pF ±10% | 0.8 | V_{P-P} |
| Phase Noise | $\mathcal{L}(\Delta f)$ | @100 kHz | -147 | dBc/Hz |

MECHANICAL SPECIFICATION



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 $t_{[25^{\circ}C]}$ to Peak Temperature | $t_{[25^{\circ}C] \text{ to Peak}}$ | 480 sec. |
| Time | t_L | 60-150 sec. |

ENVIRONMENTAL

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





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MARKING

Rx52.00

•B32yw

x – Internal Production ID code
y – Year code
w – Week code

YEAR CODE table with columns Year and Code, mapping years 2011-2019 to codes 1-9.

ALPHA WEEK CODE TABLE with columns Week and Code, mapping weeks 1-52 to letters a-Z.

APPROVALS

Approval table with fields: RALTRON, Created by, date: CP, November 15, 2017; Eng. approval, date: JI, November 15, 2017; Revision: A Initial Release, B CP, February 14, 2019, Updated Mechanical Specification.

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