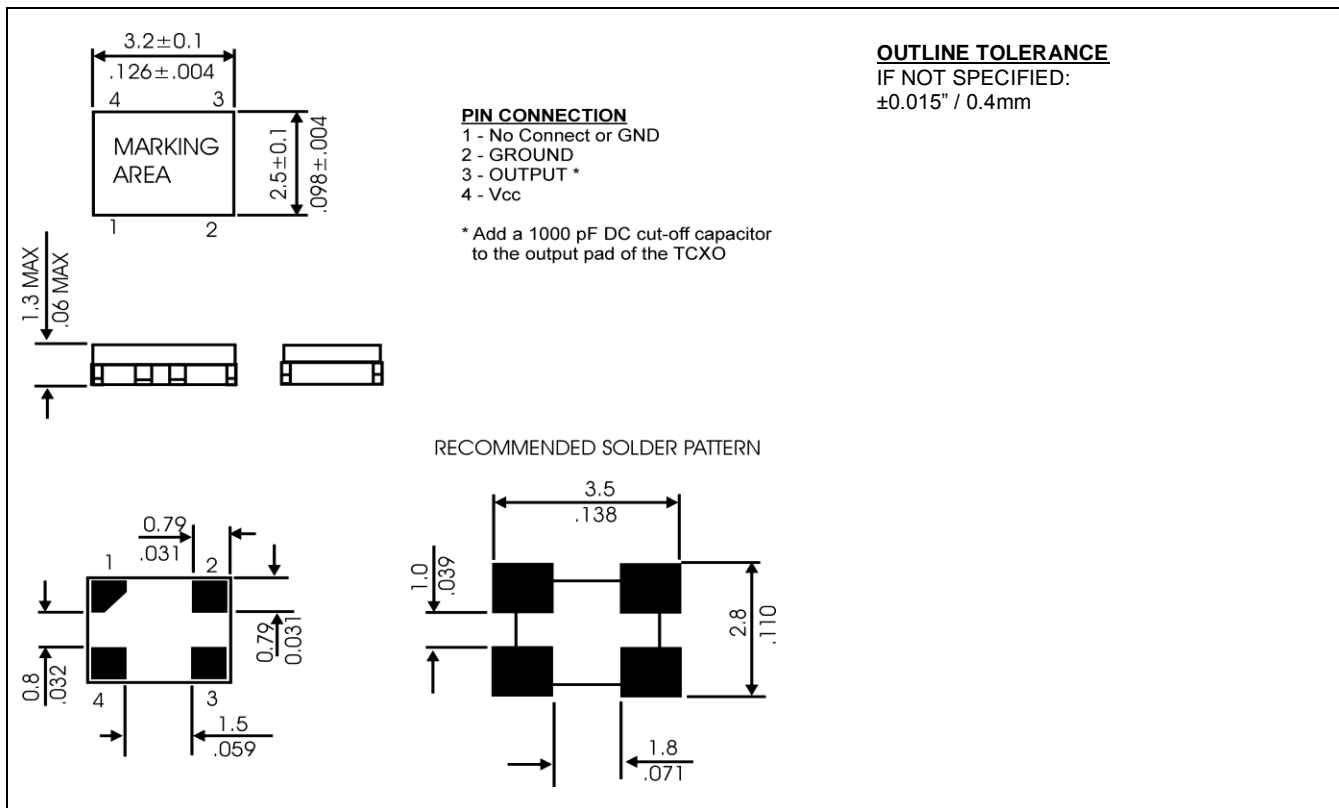


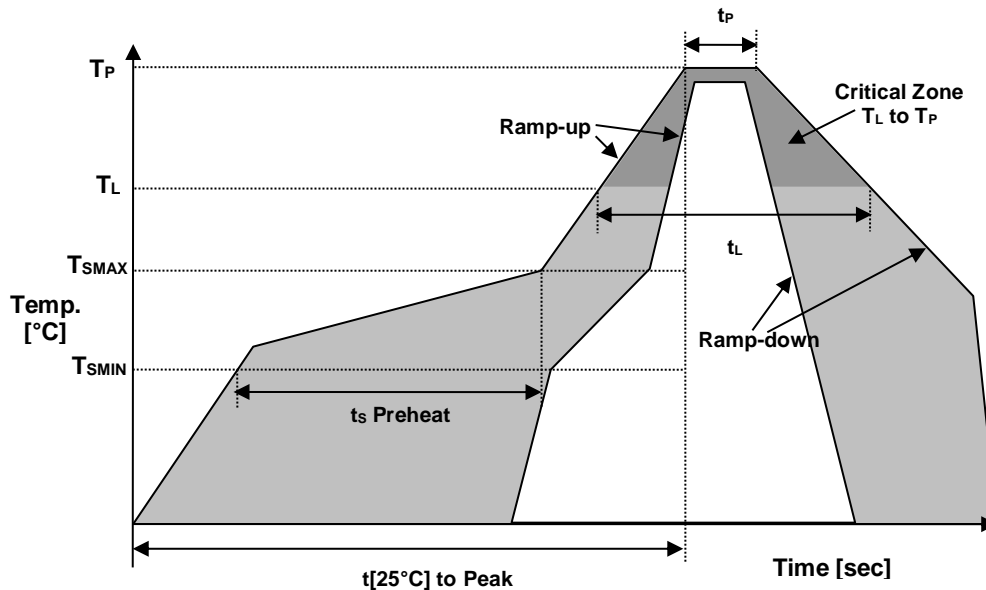
ELECTRICAL SPECIFICATION

| PARAMETER | SYMBOL | CONDITIONS | VALUE | UNIT | |
|--|-------------------------|---|---|--------------------|-----|
| Nominal Frequency | f_o | $T_a=25^{\circ}\text{C}$ | 32.000 | MHz | |
| Supply voltage range | V_{CC} | --- | 1.8 | VDC | |
| Supply current, max | I_s | $T_a=25^{\circ}\text{C}$ | 2.0 | mA | |
| Operating temperature | T_a | --- | -40 ~ +85 | $^{\circ}\text{C}$ | |
| Storage temperature | $T(\text{stg})$ | Absolute max | -40 ~ +85 | $^{\circ}\text{C}$ | |
| Frequency Stability | vs. Temperature | $\Delta f/f_o(T_a)$ | Reference to $+25^{\circ}\text{C}$ over Temperature Range | ± 1.5 | ppm |
| | vs. Supply Voltage | $\Delta f/f_v$ | $V_{CC}=3.0 \pm 0.15\text{ V}$ | ± 0.2 | ppm |
| | vs. Load | $\Delta f/f_L$ | Load $\pm 10\%$, $V_{CC}=3.0 \pm 5\%$ | ± 0.2 | ppm |
| | vs. Aging Max | $\Delta f/f_o(\text{year})$ | Per Year at $+25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ | ± 1.0 | ppm |
| Initial Frequency Calibration, Max | f_c | Measured at 25°C , Reference to f_o | ± 1.0 | ppm | |
| Output Level, Clipped Sine Wave, Minimum | - | 10K Ohms // 10 pF $\pm 10\%$ | 0.8 | V_{P-P} | |
| Start up time, Max | t_s | $V_{OUT} \geq 90\% V_{P-P}$ | 2 | ms | |
| Phase noise @ freq. offset, typical. | $\mathcal{L}(\Delta f)$ | $\Delta f=1\text{kHz}$ | -135 | 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°C] to Peak Temperature | t[25°C] to Peak | 480 sec. |
| Time | t _L | 60-150 sec. |

ENVIRONMENTAL

| PARAMETER | VALUE |
|----------------------------|-----------|
| MOISTURE SENSITIVITY LEVEL | 1 |
| RoHS2 | Compliant |
| REACH-SVHC | Compliant |
| HALOGEN-FREE | Compliant |
| TERMINATION FINISH | Au |



• MARKING

Rxx32.00

• CD31yw

x – Internal Production ID code

y – Year code

w – Week code

| YEAR CODE | |
|-----------|------|
| Year | Code |
| 2011 | 1 |
| 2012 | 2 |
| 2013 | 3 |
| 2014 | 4 |
| 2015 | 5 |
| 2016 | 6 |
| 2017 | 7 |
| 2018 | 8 |
| 2019 | 9 |

| ALPHA WEEK CODE TABLE | | | | | |
|-----------------------|------|------|------|------|------|
| Week | Code | Week | Code | Week | Code |
| 1 | a | 19 | s | 37 | K |
| 2 | b | 20 | t | 38 | L |
| 3 | c | 21 | u | 39 | M |
| 4 | d | 22 | v | 40 | N |
| 5 | e | 23 | w | 41 | O |
| 6 | f | 24 | x | 42 | P |
| 7 | g | 25 | y | 43 | Q |
| 8 | h | 26 | z | 44 | R |
| 9 | i | 27 | A | 45 | S |
| 10 | j | 28 | B | 46 | T |
| 11 | k | 29 | C | 47 | U |
| 12 | l | 30 | D | 48 | V |
| 13 | m | 31 | E | 49 | W |
| 14 | n | 32 | F | 50 | X |
| 15 | o | 33 | G | 51 | Y |
| 16 | p | 34 | H | 52 | Z |
| 17 | q | 35 | I | | |
| 18 | r | 36 | J | | |

• APPROVAL

| RALTRON | |
|--------------|-------------------------|
| DRAWN BY: | KJackson, July 20, 2017 |
| APPROVED BY: | Jlvns, July 20, 2017 |
| REVISION: | A, Initial Release |

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