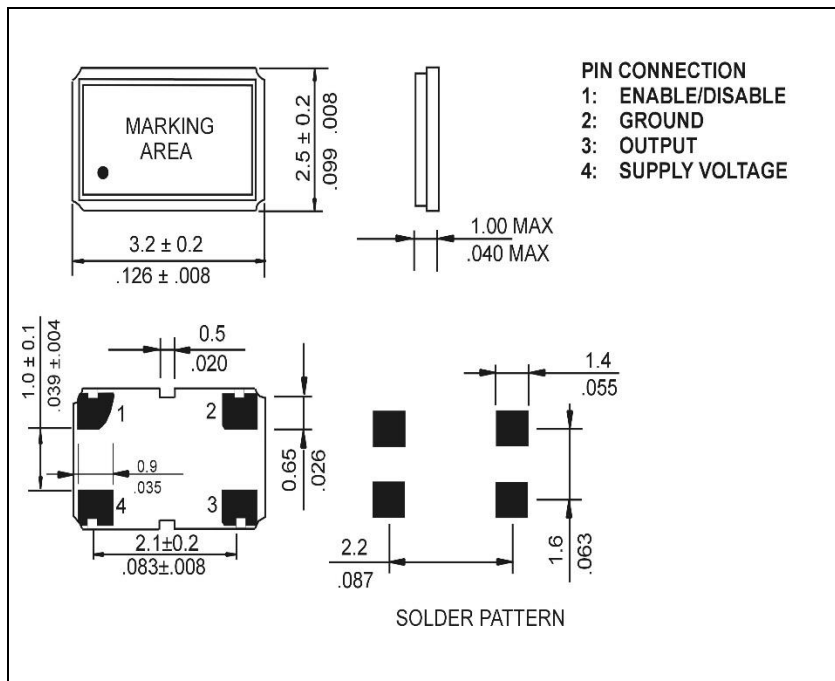


ELECTRICAL SPECIFICATION

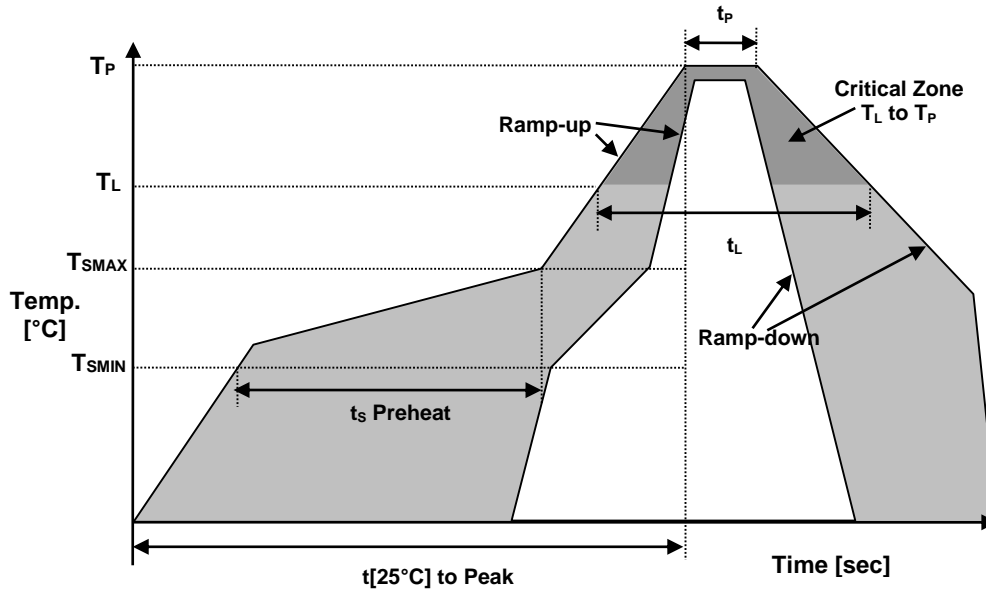
| PARAMETER | SYMBOL | CONDITIONS | VALUE | UNIT |
|---------------------------|----------------|---|-----------------------------------|--------------------|
| Nominal Frequency | f_o | $T_a=25^{\circ}\text{C}$ | 48.000 | MHz |
| Supply voltage range | V_{CC} | --- | 3.3 | VDC |
| Supply current, max | I_s | $T_a=25^{\circ}\text{C}$ | 3.5 | mA |
| Operating temperature | T_a | --- | -40 ~ +85 | $^{\circ}\text{C}$ |
| Storage temperature | $T_{(stg)}$ | Absolute max | -55 ~ +125 | $^{\circ}\text{C}$ |
| Frequency Tolerance | $\Delta f/f_o$ | Inclusive of 25 $^{\circ}\text{C}$ Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging, Shock and Vibration | ± 25 | ppm |
| Output Voltage | V_{OL} | Logic "0" Level | $0.1 \times V_{CC}$ | VDC |
| | V_{OH} | Logic "1" Level | $0.9 \times V_{CC}$ | VDC |
| Output Load | --- | CMOS Output | 15 | pF |
| Enable / Disable Function | E/D | Pin 1: N.C. (Open) or High | Pin 3 – Oscillation (Enabled) | |
| | | Pin 1: Low | Pin 3 – High Impedance (Disabled) | |
| Symmetry (Duty Cycle) | DC | @50% V_{DD} | 45 to 55 | % |
| Rise Time and Fall Time | t_r / t_f | @10% to 90% V_{DD} | 6.5 | ns |
| Stand-by Current | $I_{(std)}$ | --- | 10 | μA |
| Start up time, Max | t_s | $V_{OUT} \geq 90\% V_{P-P}$ | 10 | ms |

MECHANICAL SPECIFICATION



NOTE: A capacitor of 0.01 μF between V_{CC} and Ground is recommended

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

ENVIRONMENTAL

| PARAMETER | VALUE |
|----------------------------|---------------------------|
| MOISTURE SENSITIVITY LEVEL | 1 |
| RoHS2 | 6/6 COMPLIANT & LEAD FREE |
| REACH-SVHC | COMPLIANT |
| HALOGEN-FREE | COMPLIANT |
| TERMINATION FINISH | Au |



• MARKING

Rx48.0
•3AEyw

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, November 14, 2015 |
| APPROVED BY: | KJackson, November 14, 2015 |
| REVISION: | A, Initial Release |