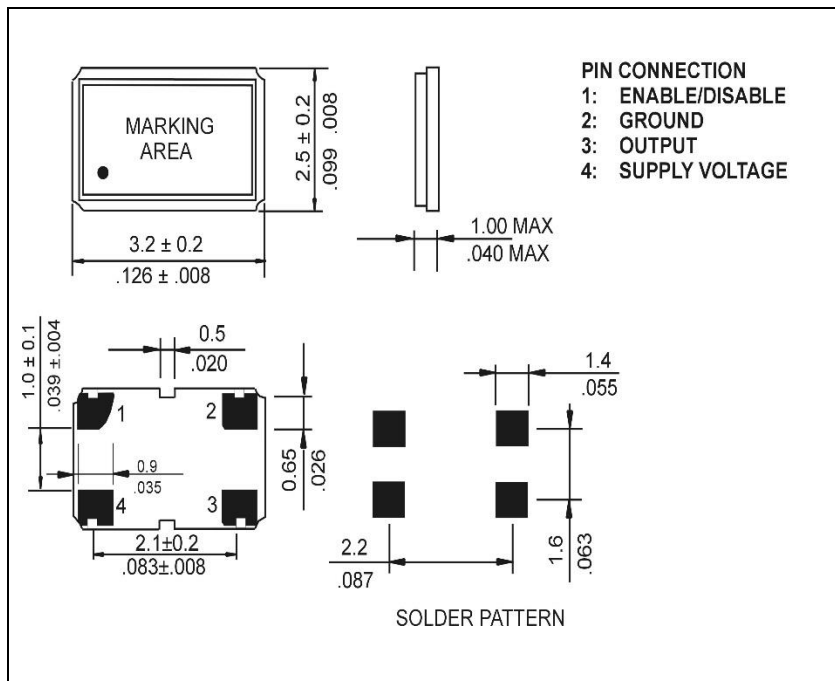


#### ELECTRICAL SPECIFICATION

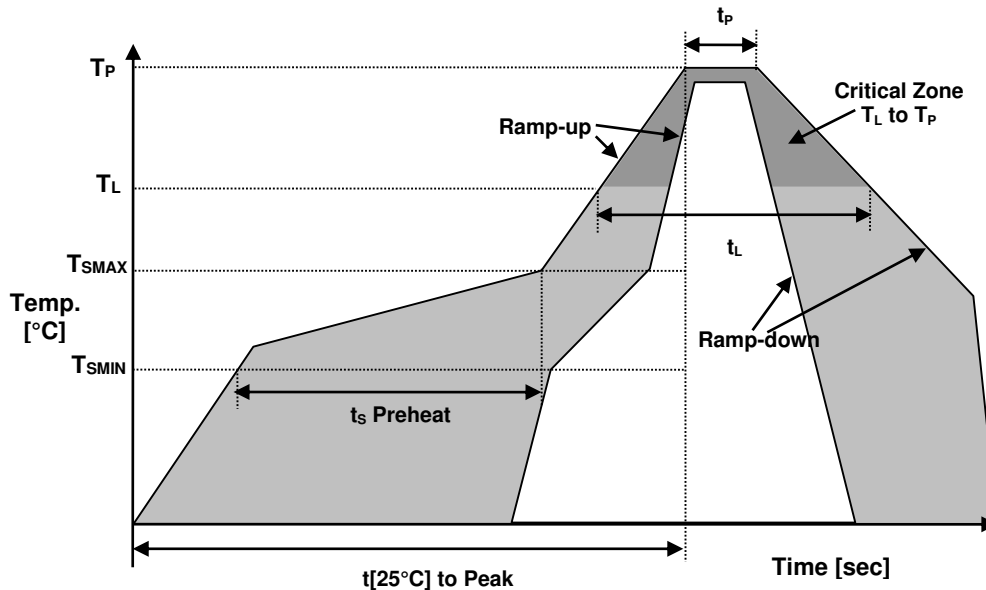
| PARAMETER                 | SYMBOL         | CONDITIONS  | VALUE                             | UNIT               |
|---------------------------|----------------|---|-----------------------------------|--------------------|
| Nominal Frequency         | $f_o$          | $T_a=25^{\circ}\text{C}$  | 50.000                            | 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 | $\pm 50$                          | 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% Vdd  | 40 to 60                          | %                  |
| Rise Time and Fall Time   | $t_r / t_f$    | @10% to 90% Vdd   | 6.5                               | ns                 |
| Stand-by Current          | $I_{(std)}$    | ---   | 10                                | $\mu\text{A}$      |
| Start up time, Max        | $t_s$          | $V_{OUT} \geq 90\% V_{P-P}$   | 10                                | ms                 |

#### MECHANICAL SPECIFICATION



NOTE: A capacitor of 0.01  $\mu\text{F}$  between Vcc 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 $t_{[25^\circ\text{C}]}$ 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                         |
| RoHS2                      | 6/6 COMPLIANT & LEAD FREE |
| REACH-SVHC                 | COMPLIANT                 |
| HALOGEN-FREE               | COMPLIANT                 |
| TERMINATION FINISH         | Au                        |



• MARKING

Rx50.0  
•3BEyw

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, February 19, 2016 |
| APPROVED BY: | KJackson, February 19, 2016 |
| REVISION:    | A, Initial Release          |