

#### ELECTRICAL SPECIFICATION

| PARAMETER                   | SYMBOL          | CONDITIONS                                                                                                             | VALUE      | UNIT |
|-----------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------|------------|------|
| Nominal Frequency           | fo              | Ta=25°C                                                                                                                | 25.000     | MHz  |
| Supply Voltage, nom.        | Vcc             | Vcc ±10%                                                                                                               | 3.3        | V    |
| Supply Current, max.        | Is              | Vcc=5.0 VDC; Ta=+25°C; Load=15 pF CMOS                                                                                 | 30         | mA   |
| Operating Temperature Range | Ta              | -                                                                                                                      | -40 ~ +85  | °C   |
| Storage Temperature Range   | T(stg)          | -                                                                                                                      | -55 ~ +125 | °C   |
| Frequency Stability         | Δf/fo           | Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging, Shock and Vibration | ±25        | ppm  |
| Output Voltage Levels       | VO <sub>L</sub> | Logic "0" Level,                                                                                                       | 0.5        | VDC  |
|                             | VO <sub>H</sub> | Logic "1" Level                                                                                                        | 4.5        |      |
| Output Load                 | ---             | CMOS                                                                                                                   | 15         | pF   |
| Symmetry (Duty cycle)       | DC              | @ 50% of signal (Vdd)                                                                                                  | 40 ~ 60    | %    |
| Start Up Time, max          |                 |                                                                                                                        | 5          | ns   |
| Rise time / Fall time, max. | tr / tf         | 20%~80% Vout, 80%~20% Vout,                                                                                            | 10         | ns   |

#### MECHANICAL SPECIFICATION

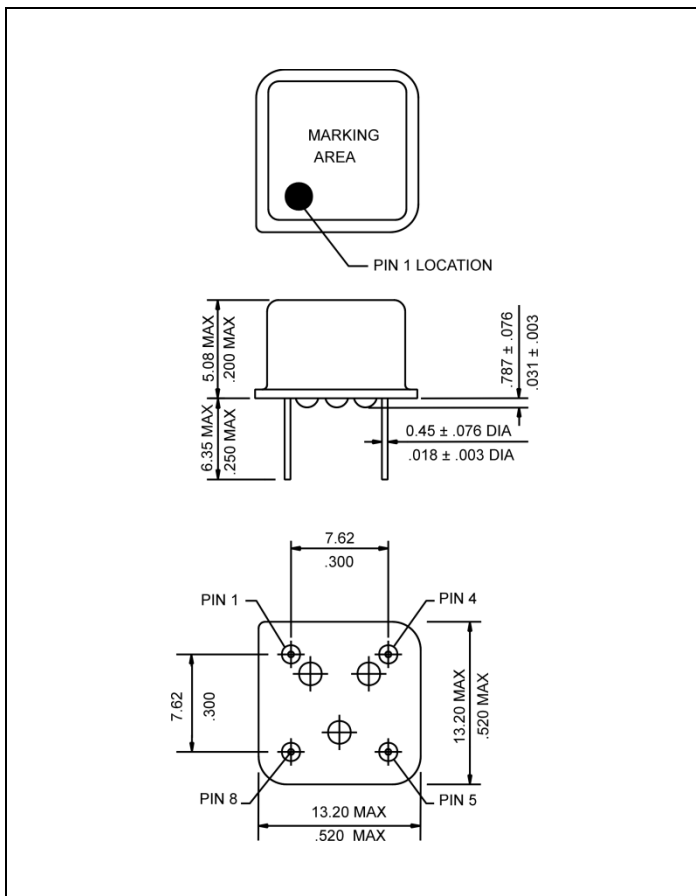
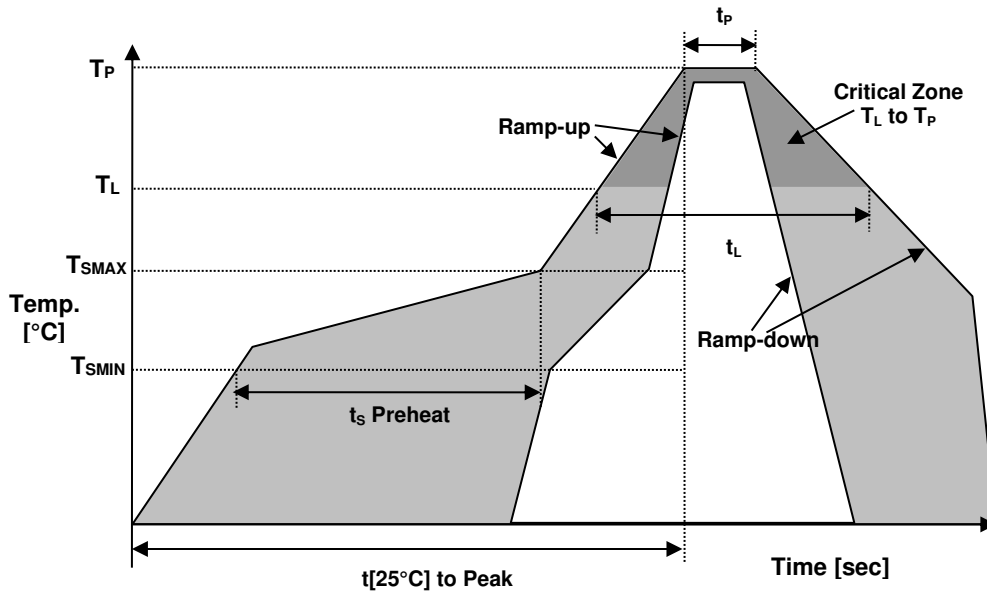


Photo is not actual part

| PIN CONNECTION |          |
|----------------|----------|
| PIN            | FUNCTION |
| 1              | nc       |
| 7              | Ground   |
| 8              | Output   |
| 14             | Vcc      |

### 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 max.   |
| 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         |
| RoHS                       | Compliant |
| REACH-SVHC                 | Compliant |
| HALOGEN-FREE               | Compliant |
| TERMINATION FINISH         | Sn        |





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# CLOCK OSCILLATOR

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CO12025-25.000-EXT-3.3

## MARKING

CO12025  
25.000  
•Rxxyyww

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

| YEAR CODE |      |
|-----------|------|
| Year      | Code |
| 2015      | 5    |
| 2016      | 6    |
| 2017      | 7    |
| 2018      | 8    |
| 2019      | 9    |
| 2020      | 0    |
| 2021      | 1    |
| 2022      | 2    |
| 2023      | 3    |
| 2024      | 4    |
| 2025      | 5    |

| 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:    | AR, February 26, 2020 |
| APPROVED BY: | CP, February 26, 2020 |
| REVISION:    | A, Initial Release    |

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