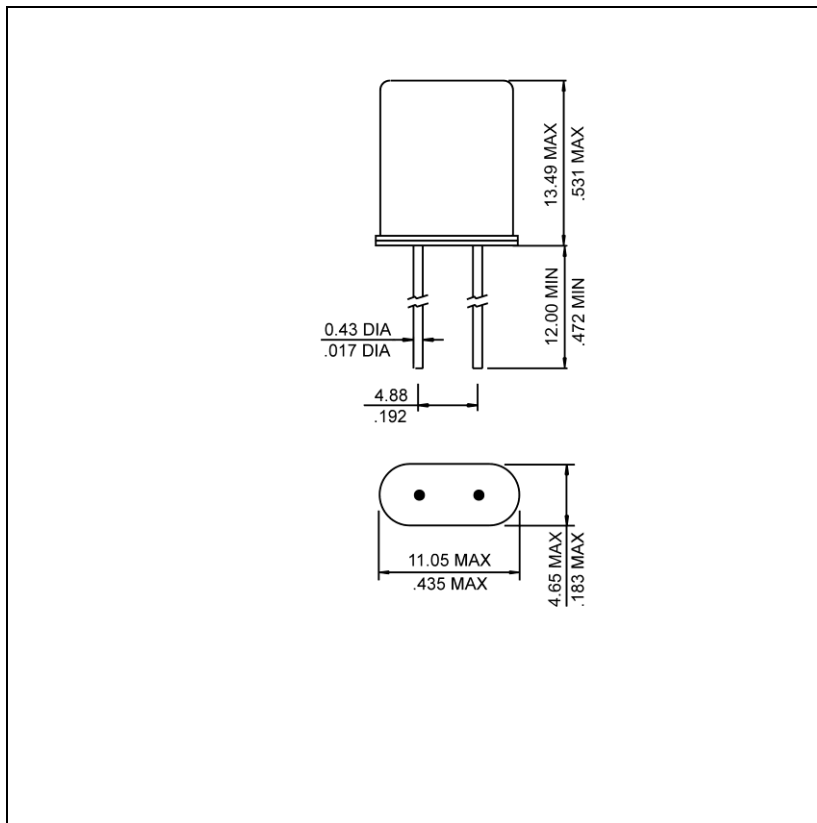


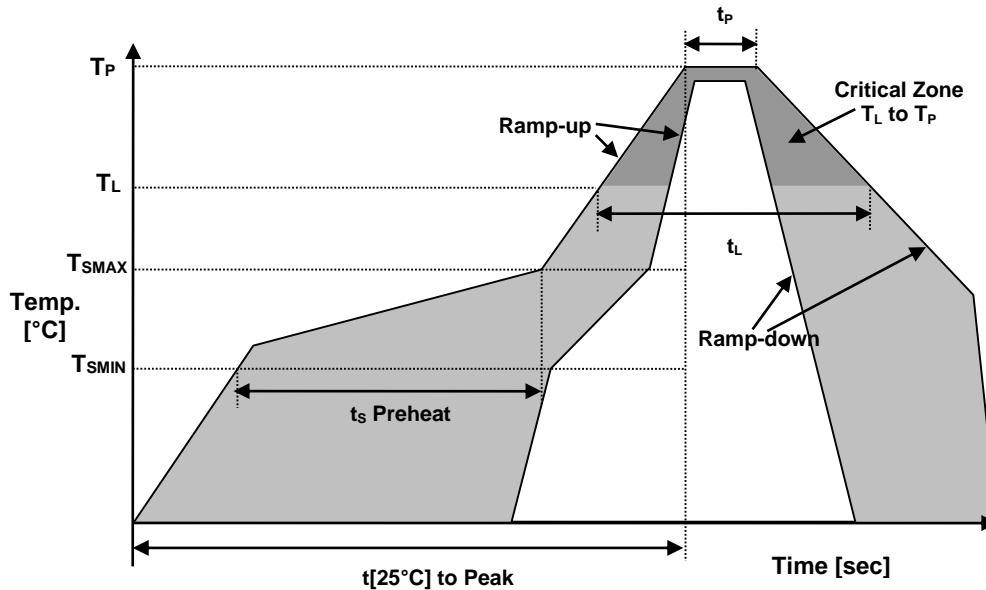
## ● SPECIFICATIONS

| PARAMETER                            | VALUE                       |
|--------------------------------------|-----------------------------|
| NOMINAL FREQUENCY                    | 16.000 MHz                  |
| MODE OF OSCILLATION                  | FUNDAMENTAL, AT-Cut         |
| FREQUENCY TOLERANCE AT 25°C          | ±30 PPM MAXIMUM             |
| FREQUENCY STABILITY OVER TEMPERATURE | ±50 PPM MAXIMUM             |
| OPERATING TEMPERATURE RANGE          | -20°C TO +70°C STANDARD     |
| STORAGE TEMPERATURE RANGE            | -55°C TO +125°C             |
| AGING, MAXIMUM                       | ±5 PPM PER YEAR             |
| LOAD CAPACITANCE                     | 20 pF                       |
| EQUIVALENT SERIES RESISTANCE         | 25 Ω                        |
| SHUNT CAPACITANCE                    | 7 pF MAXIMUM                |
| DRIVE LEVEL                          | 0.1mW TYPICAL, 1 mW MAXIMUM |
| REFLOW CONDITIONS                    | 260°C ±5°C FOR 10s MAXIMUM  |

## ● 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 $t[25^\circ\text{C}]$ 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                         |
| RoHS-2                     | 6/6 COMPLIANT & LEAD FREE |
| REACH SVHC                 | COMPLIANT                 |
| HALOGEN-FREE               | COMPLIANT                 |
| ESD CLASSIFICATION LEVEL   | N/A                       |
| TERMINATION FINISH         | Sn                        |



• MARKING

16.000  
20pF  
Ryyxxww

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

|              |                       |
|--------------|-----------------------|
| DRAWN BY:    | CP, November 19, 2015 |
| APPROVED BY: | CP, November 19, 2015 |
| REVISION:    | A, Initial Release    |