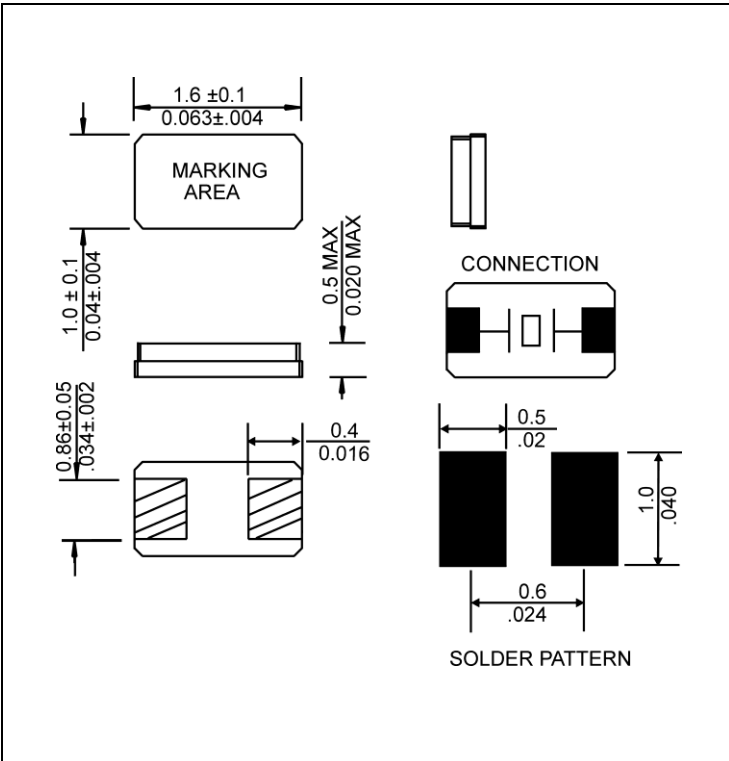


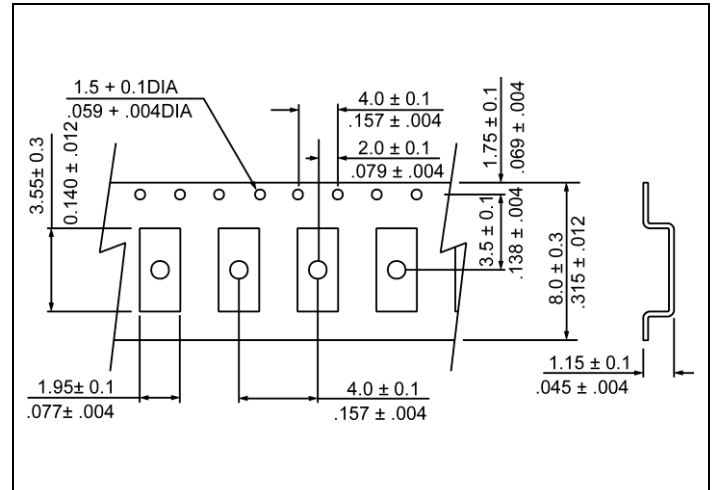
● SPECIFICATIONS

| PARAMETER                    | VALUE   |
|------------------------------|---|
| NOMINAL FREQUENCY            | 32.768 kHz                                      |
| MODE OF OSCILLATION          | Fundamental                                     |
| FREQUENCY TOLERANCE AT 25°C  | ±20 ppm max                                     |
| TEMPERATURE COEFFICIENT      | -0.045 x 10 <sup>-6</sup> / °C <sup>2</sup> max |
| TURNOVER TEMPERATURE         | +25°C ±5°C                                      |
| OPERATING TEMPERATURE RANGE  | -40°C to +85°C                                  |
| STORAGE TEMPERATURE RANGE    | -55°C to +125°C                                 |
| AGING                        | ±3 ppm first year max                           |
| LOAD CAPACITANCE             | 9 pF  |
| EQUIVALENT SERIES RESISTANCE | 90 kΩ max                                       |
| SHUNT CAPACITANCE            | 2 pF max  |
| DRIVE LEVEL                  | 0.1 μW max                                      |
| INSULATION RESISTANCE        | 500 MΩ min @ DC 100V                            |

● MECHANICAL SPECIFICATION



● CARRIER TAPE DIMENSIONS



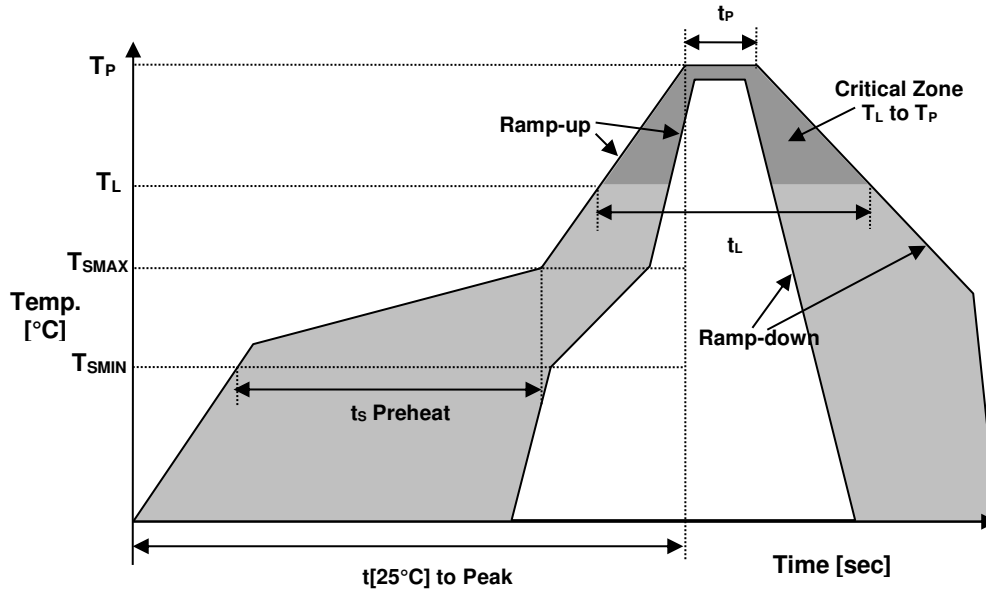
NOTE: REFER TO EIA-481 FOR DIMENSIONS

● PACKAGING

178 mm REEL DIAMETER  
8 mm TAPE WIDTH, 4 mm PITCH  
QUANTITY: 3000 PIECES PER REEL

IN ACCORDANCE WITH EIA-481

● REFLOW PROFILE



| Reflow profile                                 |                   |              |
|--|-------------------|--------------|
| Temperature Min Preheat                        | T <sub>SMIN</sub> | 150°C        |
| Temperature Max Preheat                        | T <sub>SMAX</sub> | 200°C        |
| Time (T <sub>SMIN</sub> to T <sub>SMAX</sub> ) | t <sub>s</sub>    | 60-180 sec.  |
| Temperature                                    | T <sub>L</sub>    | 217°C        |
| Peak Temperature                               | T <sub>P</sub>    | 260°C        |
| Ramp-up rate                                   | R <sub>UP</sub>   | 3°C/sec max. |
| Ramp-down rate                                 | R <sub>DOWN</sub> | 6°C/sec max. |
| Time within 5°C of Peak Temperature            | t <sub>P</sub>    | 10 sec.      |
| Time t[25°C] to Peak Temperature               | t[25°C] to Peak   | 480 sec.     |
| Time   | t <sub>L</sub>    | 60-150 sec.  |

● ENVIRONMENTAL

| PARAMETER                  | VALUE     |
|----------------------------|-----------|
| MOISTURE SENSITIVITY LEVEL | 1         |
| RoHS                       | Compliant |
| REACH SVHC                 | Compliant |
| HALOGEN-FREE               | Compliant |
| ESD CLASSIFICATION LEVEL   | N/A       |
| TERMINATION FINISH         | Au        |



● MARKING

Jyww

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

| YEAR CODE |      |
|-----------|------|
| Year      | Code |
| 2019      | 9    |
| 2020      | 0    |
| 2021      | 1    |
| 2022      | 2    |
| 2023      | 3    |
| 2024      | 4    |
| 2025      | 5    |
| 2026      | 6    |
| 2027      | 7    |
| 2029      | 8    |
| 2029      | 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:    | KJackson, November 7, 2018   |
| Approved By: | Jlvns, November 7, 2018  |
| Revision:    | A, Initial Release<br>B, Updated to current spec levels by<br>XLiu, December 16, 2020<br>C, Updated to current spec levels by XS,<br>March 4, 2021 |

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