

#### R2016-48.000-7-F-0715-TR-NS1

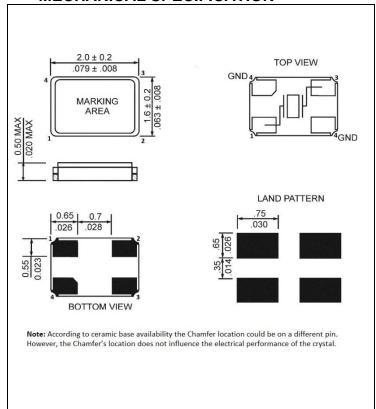
## SPECIFICATIONS

| PARAMETER                            | VALUE                             |
|--------------------------------------|-----------------------------------|
| NOMINAL FREQUENCY                    | 48.000 MHz                        |
| MODE OF OSCILLATION                  | Fundamental                       |
| FREQUENCY TOLERANCE AT 25°C          | ±7 ppm max                        |
| FREQUENCY STABILITY OVER TEMPERATURE | ±15 ppm max                       |
| OPERATING TEMPERATURE RANGE          | -30°C to +95°C                    |
| STORAGE TEMPERATURE RANGE            | -40°C to +95°C                    |
| AGING                                | ±2 ppm first year max             |
| LOAD CAPACITANCE                     | 7 pF                              |
| EQUIVALENT SERIES RESISTANCE         | 22 $\Omega$ max $\Leftrightarrow$ |
| SHUNT CAPACITANCE                    | 3.5 pF max                        |
| DRIVE LEVEL                          | 100 μW max                        |
| INSLATION REISTANCE                  | 500 M $\Omega$ min @ DC 100V      |

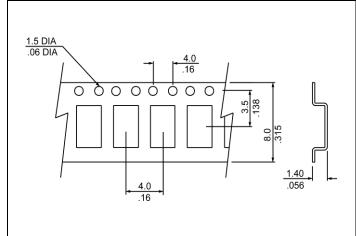


Photo is not actual part

# MECHANICAL SPECIFICATION



# CARRIER TAPE DIMENSIONS



NOTE: REFER TO EIA-481 FOR DIMENSIONS

# PACKAGING

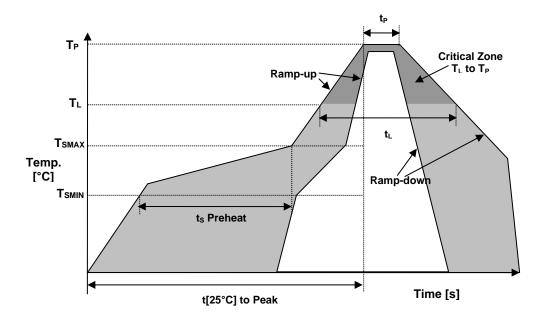
178 mm REEL DIAMETER 8 mm TAPE WIDTH, 4 mm PITCH QUANTITY: 3000 PIECES PER REEL

IN ACCORDANCE WITH EIA-481



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### 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                               | $T_P$             | 260°C      |  |
| Ramp-up rate                                   | R <sub>UP</sub>   | 3°C/s max  |  |
| Ramp-down rate                                 | R <sub>DOWN</sub> | 6°C/s 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        |





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#### MARKING

R48.00 x7Nyw

x – 1 or 2 digits as Internal Production ID code

y - Year code

w – Week code

| VEAL | CODE      |  |  |
|------|-----------|--|--|
| YEA  | YEAR CODE |  |  |
| Year | Code      |  |  |
| 2018 | 8         |  |  |
| 2019 | 9         |  |  |
| 2020 | 0         |  |  |
| 2021 | 1         |  |  |
| 2022 | 2         |  |  |
| 2023 | 3         |  |  |
| 2024 | 4         |  |  |
| 2025 | 5         |  |  |
| 2026 | 6         |  |  |
| 2027 | 7         |  |  |
| 2028 | 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   | О    |
| 6                     | f    | 24   | x    | 42   | P    |
| 7                     | g    | 25   | У    | 43   | Q    |
| 8                     | h    | 26   | Z    | 44   | R    |
| 9                     | i    | 27   | A    | 45   | S    |
| 10                    | j    | 28   | В    | 46   | T    |
| 11                    | k    | 29   | C    | 47   | U    |
| 12                    | 1    | 30   | D    | 48   | V    |
| 13                    | m    | 31   | E    | 49   | W    |
| 14                    | n    | 32   | F    | 50   | X    |
| 15                    | О    | 33   | G    | 51   | Y    |
| 16                    | p    | 34   | Н    | 52   | Z    |
| 17                    | q    | 35   | I    |      |      |
| 18                    | r    | 36   | J    |      |      |

# APPROVAL

| DRAWN BY:    | KJ, August 11, 2015                         |
|--------------|---|
| APPROVED BY: | KJ, August 11, 2015                         |
| REVISION:    | A, Initial Release                          |
|              | B. Update marking to current spec levels by |
|              | CP December 08, 2020                        |

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