

### SURFACE MOUNT MICROPROCESSOR CRYSTAL

Page 1 of 3

#### RH100-12.000-18-2030-EXT-TR

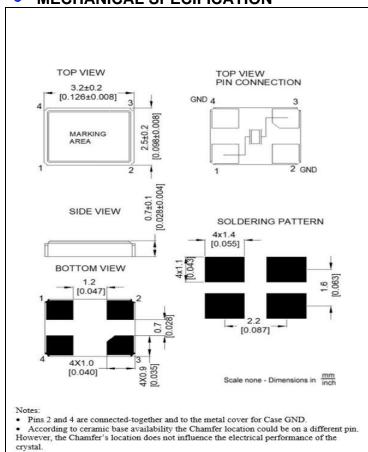
### SPECIFICATIONS

| PARAMETER                            | VALUE                 |
|--------------------------------------|-----------------------|
| NOMINAL FREQUENCY                    | 12.000 MHz            |
| MODE OF OSCILLATION                  | Fundamental           |
| FREQUENCY TOLERANCE AT 25°C          | ±20 ppm max           |
| FREQUENCY STABILITY OVER TEMPERATURE | ±30 ppm max           |
| OPERATING TEMPERATURE RANGE          | -40°C to +85°C        |
| STORAGE TEMPERATURE RANGE            | -40°C to +85°C        |
| AGING                                | ±2 ppm first year max |
| LOAD CAPACITANCE                     | 18 pF                 |
| EQUIVALENT SERIES RESISTANCE         | 100 Ω max             |
| SHUNT CAPACITANCE                    | 3.5 pF max            |
| DRIVE LEVEL                          | 300 μW max            |

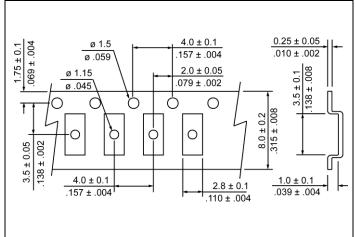


Photo is not actual part

# MECHANICAL SPECIFICATION



# CARRIER TAPE DIMENSIONS



NOTE: REFER TO EIA-481 FOR DIMENSIONS

### PACKAGING

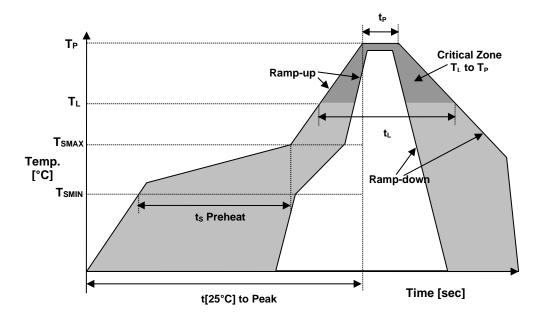
178 mm REEL DIAMETER 8 mm TAPE WIDTH, 4 mm PITCH QUANTITY: 3000 PIECES PER REEL

IN ACCORDANCE WITH EIA-481



## RH100-12.000-18-2030-EXT-TR

## 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                                    | $T_L$             | 217°C        |  |  |
| Peak Temperature                               | $T_P$             | 260°C        |  |  |
| Ramp-up rate                                   | $R_{UP}$          | 3°C/sec max. |  |  |
| Ramp-down rate                                 | R <sub>DOWN</sub> | 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∟                | 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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Page 3 of 3

### RH100-12.000-18-2030-EXT-TR

#### MARKING

R12.00 xxBDyw

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   | 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   | O                     | 33   | G    | 51   | Y    |
| 16   | p                     | 34   | H    | 52   | Z    |
| 17   | q                     | 35   | I    |      |      |
| 18   | r                     | 36   | J    |      |      |

### APPROVAL

| DRAWN BY    | CP, December 17, 2014                           |
|-------------|---|
| APPROVED BY | CP, December 17, 2014                           |
| REVISION    | A, Initial Release                              |
|             | B, Updated to current spec levels KJ 5/2/17     |
|             | C, Updated aging, shunt capacitance, reflow     |
|             | profile and year code to current spec levels XL |
|             | 5/15/19   |
|             | D, Mechanical specs updated 7/27/1              |
|             | E, Updated to current spec levels KJ 7/6/22     |
|             | F, Updated to current spec levels KJ 6/16/23    |

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