

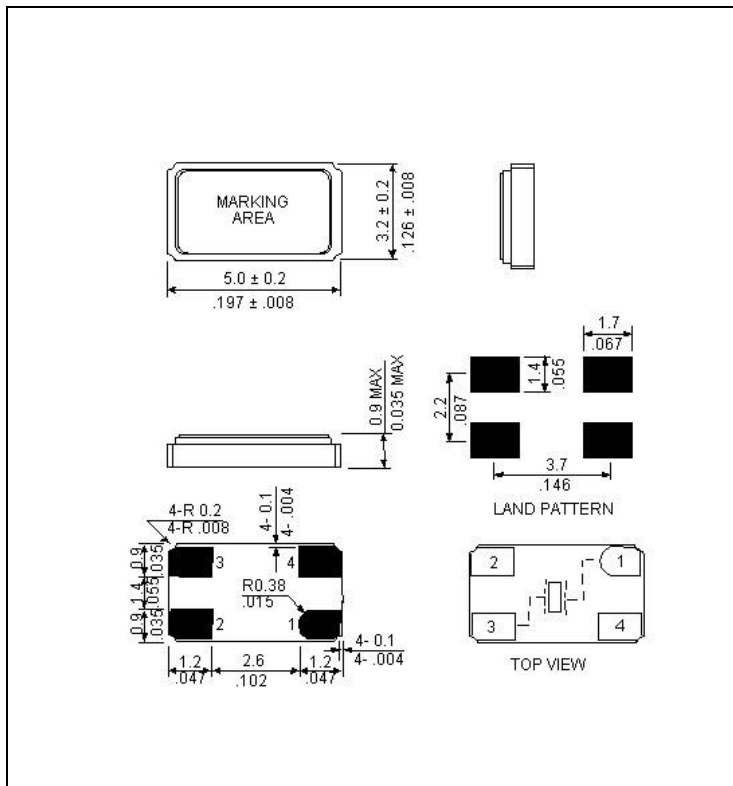
● SPECIFICATIONS

| PARAMETER | VALUE |
|--------------------------------------|-------------------------|
| NOMINAL FREQUENCY | 20.000 MHz |
| MODE OF OSCILLATION | FUNDAMENTAL |
| FREQUENCY TOLERANCE AT 25°C | ±20 PPM MAXIMUM |
| FREQUENCY STABILITY OVER TEMPERATURE | ±50 PPM MAXIMUM |
| OPERATING TEMPERATURE RANGE | -40°C TO +85°C |
| STORAGE TEMPERATURE RANGE | -40°C TO +85°C |
| AGING | ±2 PPM PER YEAR MAXIMUM |
| LOAD CAPACITANCE | 20 pF |
| EQUIVALENT SERIES RESISTANCE | 40 Ω MAXIMUM |
| SHUNT CAPACITANCE | 5 pF MAXIMUM |
| DRIVE LEVEL | 500 μW MAXIMUM |

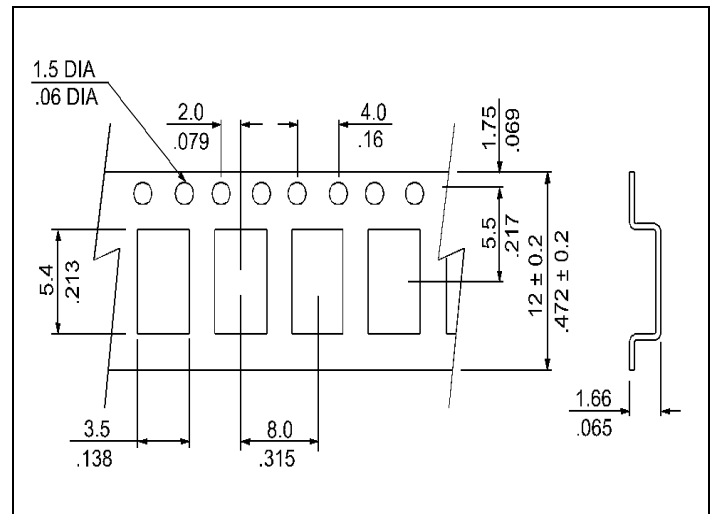


Photo is not actual part

● MECHANICAL SPECIFICATION



● CARRIER TAPE DIMENSIONS

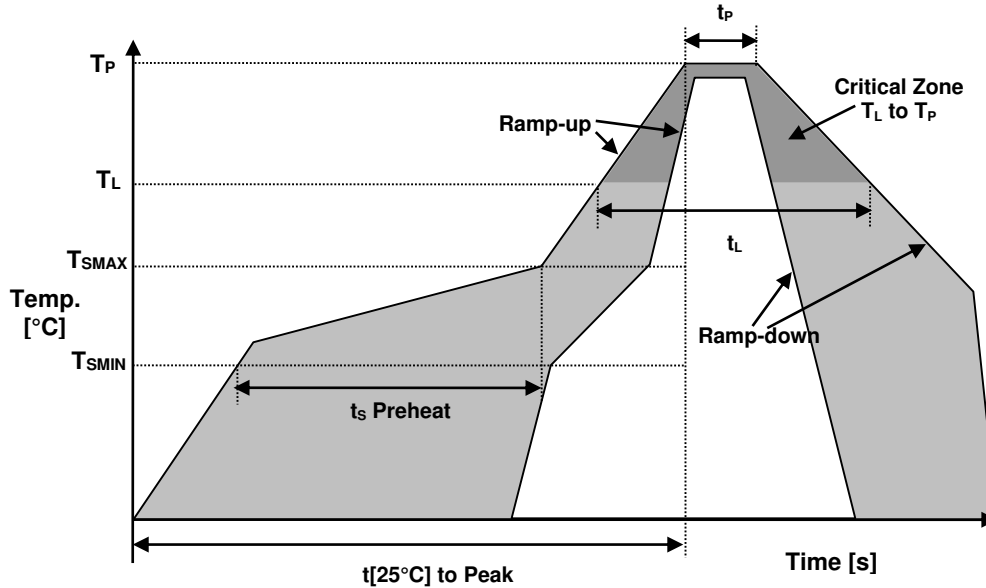


NOTE: REFER TO EIA-481 FOR DIMENSIONS

● PACKAGING

178 mm REEL DIAMETER
 12 mm TAPE WIDTH, 8 mm PITCH
 QUANTITY: 3000 PIECES PER REEL
 IN ACCORDANCE WITH EIA-481

● REFLOW PROFILE



| Reflow profile | | |
|---------------------------------------|----------------------|------------|
| Temperature Min Preheat | T_{SMIN} | 125°C |
| Temperature Max Preheat | T_{SMAX} | 150°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/s max. |
| Ramp-down rate | R_{DOWN} | 6°C/s 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-2 | 6/6 COMPLIANT & LEAD FREE |
| REACH SVHC | COMPLIANT |
| HALOGEN-FREE | COMPLIANT |
| ESD CLASSIFICATION LEVEL | N/A |
| TERMINATION FINISH | Au |



● MARKING

R20.000
xxADyw

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

| RALTRON | |
|--------------|---|
| DRAWN BY: | KJackson, Sept. 22, 2016 |
| APPROVED BY: | KJackson, Sept. 22, 2016 |
| REVISION: | A, Initial Release |
| | Specs updated to current levels KJ 9/22/16 |