

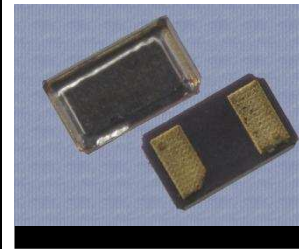
● FEATURES

- ULTRA SMALL PACKAGE OF 2.0 x 1.2 x 0.6 mm
- 32.768 KHz
- PRECISION SEALED UNIT



● SPECIFICATIONS

| PARAMETER | VALUE |
|--------------------------------------|---|
| FREQUENCY RANGE | 32.768 KHz |
| MODE OF OSCILLATION | FUNDAMENTAL |
| FREQUENCY TOLERANCE AT 25 °C | ±50 PPM MAXIMUM (±10, AND ±20 PPM AVAILABLE) |
| FREQUENCY STABILITY OVER TEMPERATURE | -0.03 ±0.01 PPM / °C ² |
| OPERATING TEMPERATURE RANGE | -40 °C TO +85 °C |
| STORAGE TEMPERATURE RANGE | -55 °C TO +125 °C |
| AGING | ±3 PPM PER YEAR MAXIMUM |
| LOAD CAPACITANCE | 9.0 pF or 12.5 pF |
| EQUIVALENT SERIES RESISTANCE | 90 KΩ MAX |
| SHUNT CAPACITANCE | 1.5 pF MAXIMUM |
| DRIVE LEVEL | 0.5 μW TYP |
| SHOCK RESISTANCE | ±5 PPM MAXIMUM 75 cm DROP TEST IN 3 AXES ONTO A HARD SURFACE |
| REFLOW CONDITIONS | 260 °C ±5 °C FOR 10s MAXIMUM |



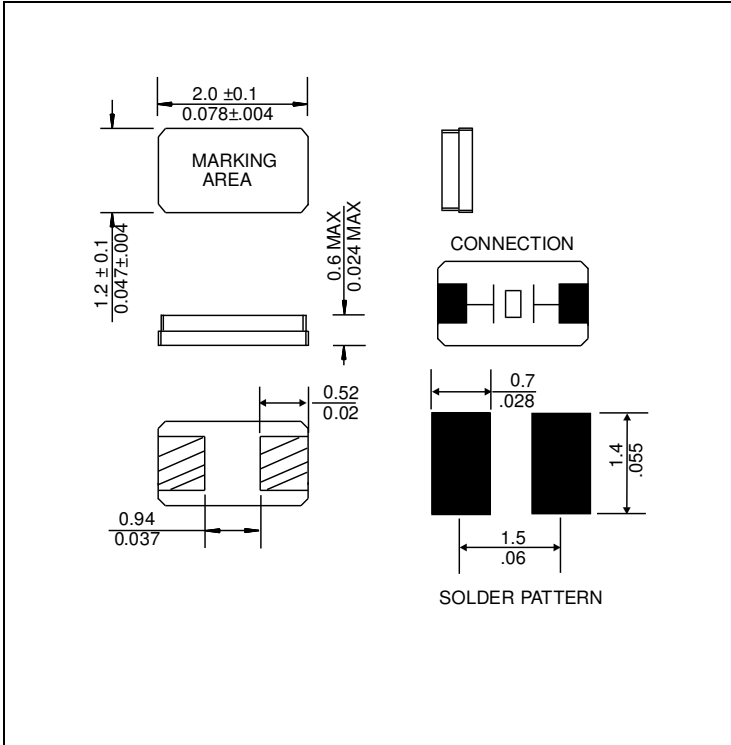
■ PART NUMBERING SYSTEM

| TYPE | - | FREQUENCY KHz | - | LOAD CAPACITANCE pF | - | TOLERANCE PPM | - | EXTENDED TEMPERATURE | - | TAPE & REEL |
|--------|---|------------------|---|---------------------------|---|----------------------------------|---|-------------------------|---|-------------------|
| RT2012 | - | 32.768 | - | 9 or 12.5 | - | BLANK for 50 ppm 10, 20 or 30 | - | EXT | - | TR |

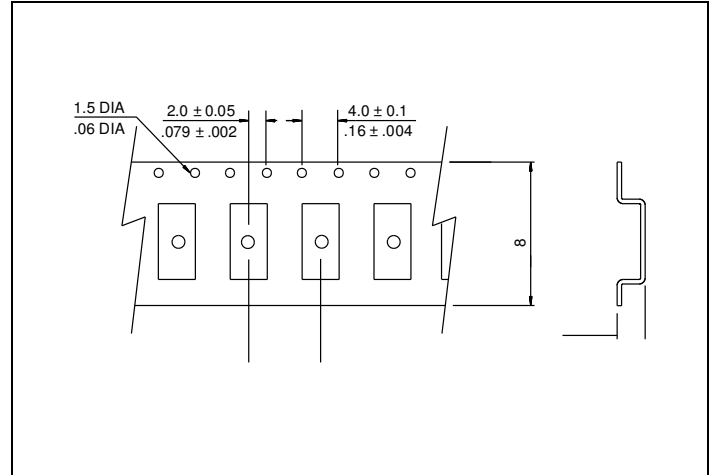
EXAMPLE: RT2012-32.768-12.5-20-EXT-TR

Surface Mount Tuning Fork Crystal, 2.0 mm x 1.2 mm package, 32.768 KHz, 12.5 pF load, ±20 ppm Tolerance, Operating Temperature from -40 °C to +85 °C, Tape and Reel packaging

● MECHANICAL SPECIFICATION



● CARRIER TAPE DIMENSIONS

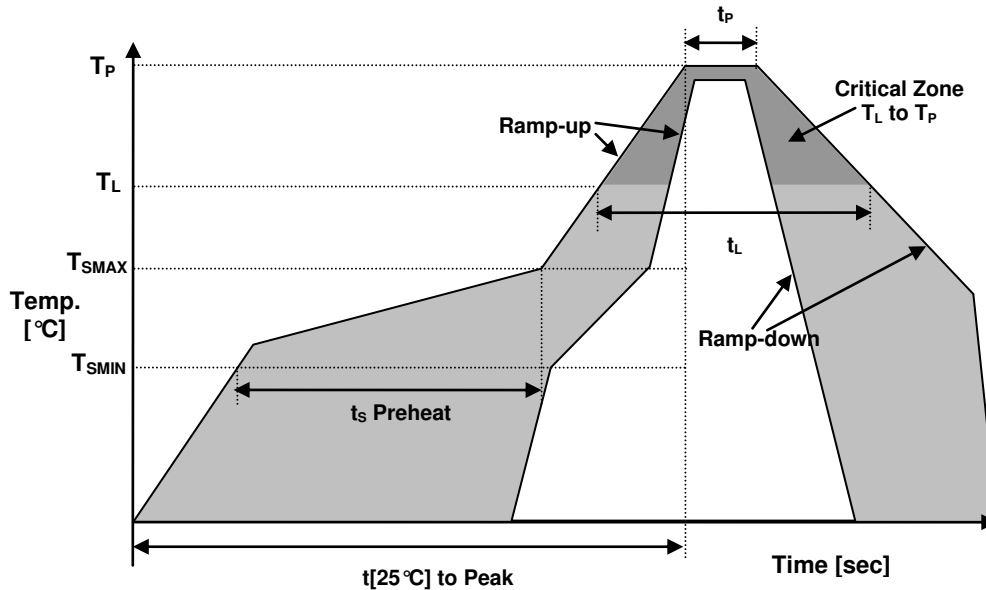


NOTE: REFER TO EIA-481 FOR DIMENSIONS

● PACKAGING

- 180 mm REEL DIAMETER
- 8 mm TAPE WIDTH
- QUANTITY: 3000 PIECES PER REEL
- IN ACCORDANCE WITH EIA-481

● REFLOW PROFILE



| Reflow profile (Reference IPC/JEDEC J-STD-020) | | |
|--|-------------------------------|--------------|
| 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 | 6/6 COMPLIANT & LEAD FREE |
| REACH SVHC | COMPLIANT |
| HALOGEN-FREE | COMPLIANT |
| ESD CLASSIFICATION LEVEL | N/A |
| TERMINATION FINISH | Au |
| UNIT WEIGHT (GRAMS) | 0.051 |

