

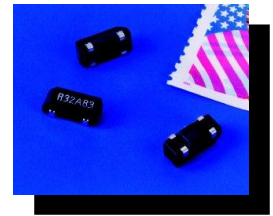
● **FEATURES**

- SUITABLE FOR TIME OF DAY CLOCKS
- SMALL AND COMPACT PACKAGE
- IDEAL FOR PICK AND PLACE ASSEMBLY



● **SPECIFICATIONS**

| PARAMETER | VALUE |
|------------------------------|----------------------------------------------------------------------------------------------|
| NOMINAL FREQUENCY | 32.768 KHz |
| FREQUENCY TOLERANCE AT 25°C | ±20 PPM MAXIMUM |
| TURNOVER TEMPERATURE | +25°C ±5°C |
| PARABOLIC CURVATURE CONSTANT | (-0.034 ±0.006) PPM/°C ² |
| OPERATING TEMPERATURE RANGE | -10°C TO +60°C |
| OPERABLE TEMPERATURE RANGE | -40°C TO +85°C |
| STORAGE TEMPERATURE RANGE | -55°C TO +125°C |
| AGING (FIRST YEAR) | ±3 PPM MAXIMUM |
| LOAD CAPACITANCE | 6, 7, 8, 9 OR 12.5 pF |
| EQUIVALENT SERIES RESISTANCE | 50K OHMS MAXIMUM |
| SHUNT CAPACITANCE | 1.35 pF TYPICAL |
| MOTIONAL CAPACITANCE | 0.003 pF TYPICAL |
| CAPACITANCE RATIO | 450 TYPICAL |
| DRIVE LEVEL | 1 μW MAXIMUM |
| INSULATION RESISTANCE | 500 MOHM MINIMUM |
| SHOCK RESISTANCE | ±5 PPM MAXIMUM 75 cm DROP TEST ONTO A HARD SURFACE OR 3000 g X 0.3 ms X ½ SINEWAVE IN 3 AXES |
| REFLOW CONDITIONS | 260°C ±5°C FOR 10s MAXIMUM |



■ **PART NUMBERING SYSTEM**

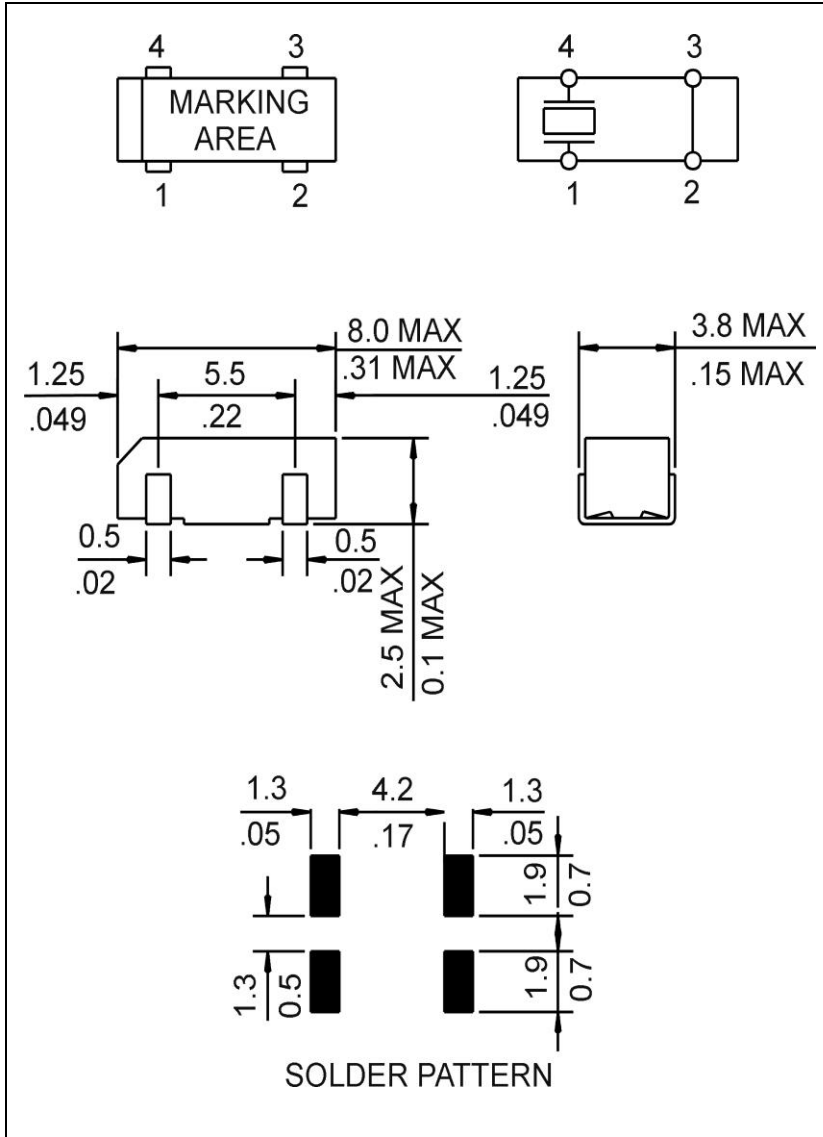
| TYPE | - | FREQUENCY IN KHz | - | LOAD CAPACITANCE (pF) | - | TAPE & REEL |
|---------|---|------------------|---|-----------------------|---|-------------|
| RSM200S | - | 32.768 | - | 6 to 12.5 | - | TR |

EXAMPLE: RSM200S-32.768-12.5-TR

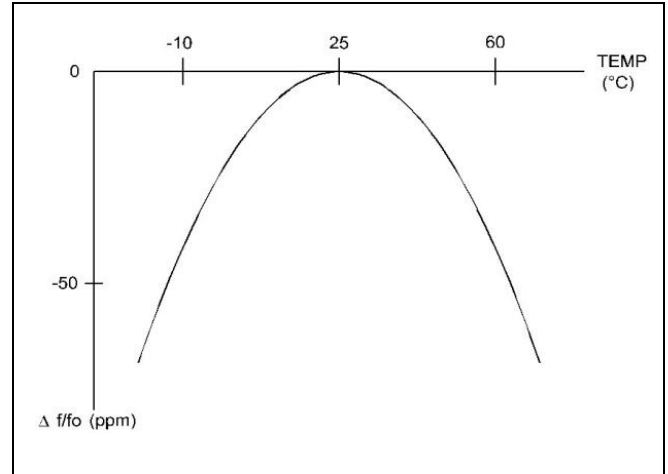
Surface Mount Tuning Fork Crystal, 8.0 x 3.8 mm, 32.768 KHz, 12.5 pF load, ±20 ppm Tolerance, from -40°C to +85°C, Tape and reel packaging

SERIES RSM200S

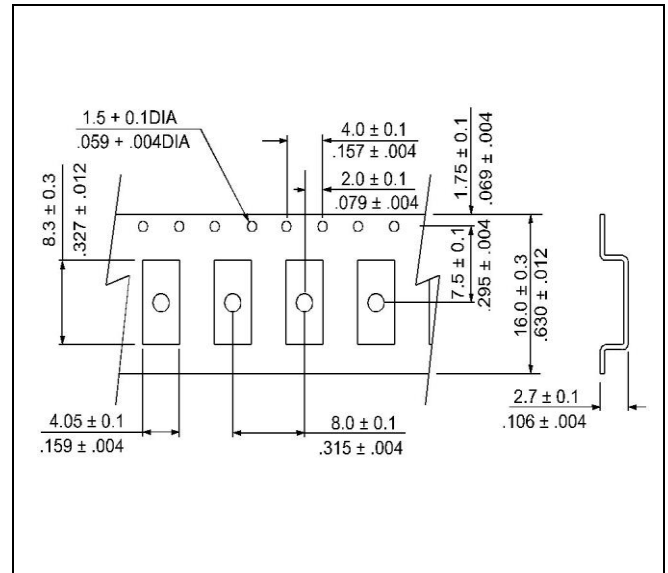
MECHANICAL SPECIFICATION



FREQUENCY vs. TEMPERATURE CURVE



CARRIER TAPE DIMENSIONS



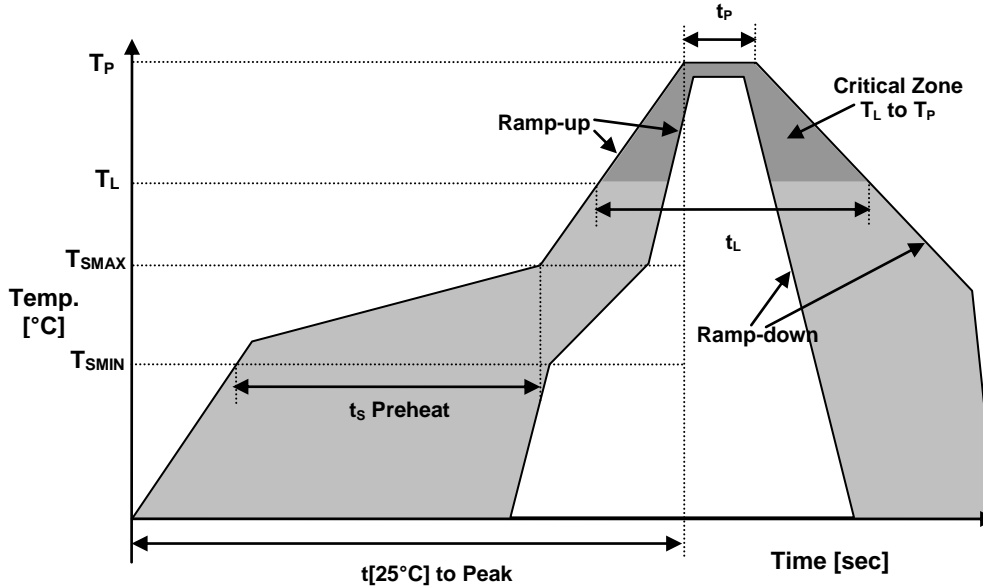
NOTE REFER TO eia-481 FOR NON-SPECIFIED DIMENSIONS

PACKAGING

330 mm REEL DIAMETER
16 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} | 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 | 5/6 – EXEMPTION 7A |
| REACH SVHC | COMPLIANT |
| HALOGEN-FREE | COMPLIANT |
| ESD CLASSIFICATION LEVEL | N/A |
| TERMINATION FINISH | Sn |
| UNIT WEIGHT (GRAMS) | 0.14 |

