

### SERIES RT1210

#### ● FEATURES

- 32.768 kHz
- SMALL AND COMPACT PACKAGE

#### ● SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 kHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C ± 3°C	±20 ppm *
FREQUENCY STABILITY OVER TEMPERATURE COEFFICIENT	-0.036 ppm / °C <sup>2</sup> typ
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-55°C to +125°C
AGING AT 25°C ± 3°C	±5 ppm first year max
INSULATION RESISTANCE AT 100 VDC	500 MΩ
LOAD CAPACITANCE	6 pF to 12.5 pF
EQUIVALENT SERIES RESISTANCE	90 kΩ max
SHUNT CAPACITANCE	1.4 pF typ
DRIVE LEVEL	0.3 μw max

Note: \* Contact the factory for other tolerances.

#### ● PART NUMBERING SYSTEM

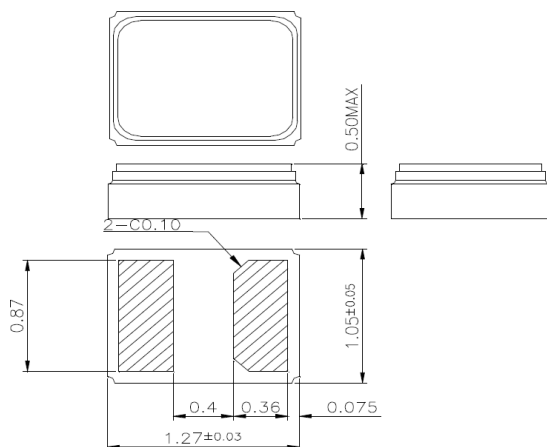
TYPE	-	FREQUENCY kHz	-	LOAD CAPACITANCE pF	-	TOLERANCE ppm	-	TAPE & REEL
RT1210	-	32.768	-	6 to 12.5	-	Blank for ±20 ppm	-	TR

#### EXAMPLE: RT1210-32.768-12.5-TR

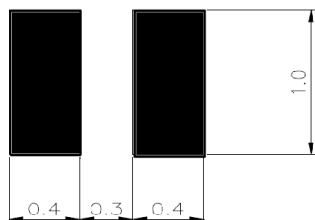
Surface Mount Tuning Fork Crystal, 1.2 mm x 1.0 mm Package, 32.768 kHz, 12.5 pF Load, ±20 ppm Tolerance, Operating Temperature from -40°C to +85°C, Tape and Reel Packaging

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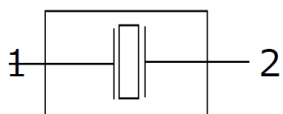
### MECHANICAL SPECIFICATION



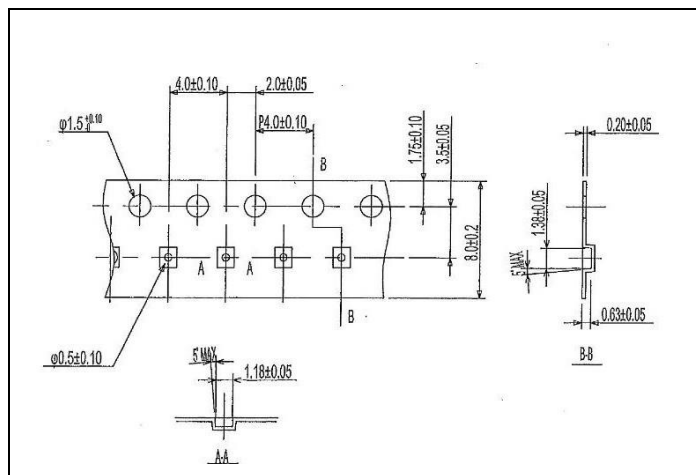
Recommended Soldering Pattern



Internal Lead Connections



Unit: mm

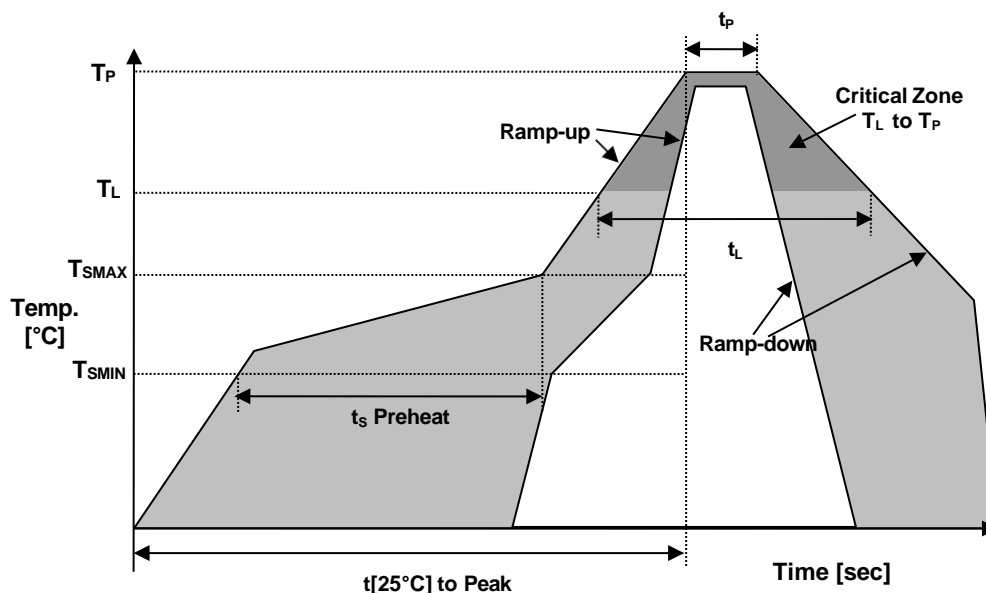


NOTE: REFER TO EIA-481 FOR DIMENSIONS

### PACKAGING

180 mm REEL DIAMETER  
8 mm TAPE WIDTH, 4mm PITCH  
QUANTITY: 5000 PIECES PER REEL

## 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	COMPLIANT
REACH SVHC	COMPLIANT
HALOGEN-FREE	COMPLIANT
TERMINATION FINISH	Au



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