

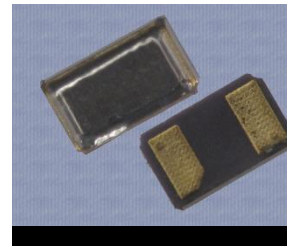
● FEATURES

- 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 max (±10, ±20 ppm available)
FREQUENCY STABILITY OVER TEMPERATURE	-0.03 ±0.01 ppm / °C ²
OPERATING TEMPERATURE RANGE	-40°C ~ +85°C
STORAGE TEMPERATURE RANGE	-55°C ~ +125°C
AGING	±3 ppm per year max
LOAD CAPACITANCE	9.0 pF or 12.5 pF
EQUIVALENT SERIES RESISTANCE	90 kΩ max
SHUNT CAPACITANCE	1.5 pF max
DRIVE LEVEL	0.5 μW typ
SHOCK RESISTANCE	±5 ppm max 75 cm drop test in 3 axes onto a hard surface
REFLOW CONDITIONS	260°C ±5°C for 10s max



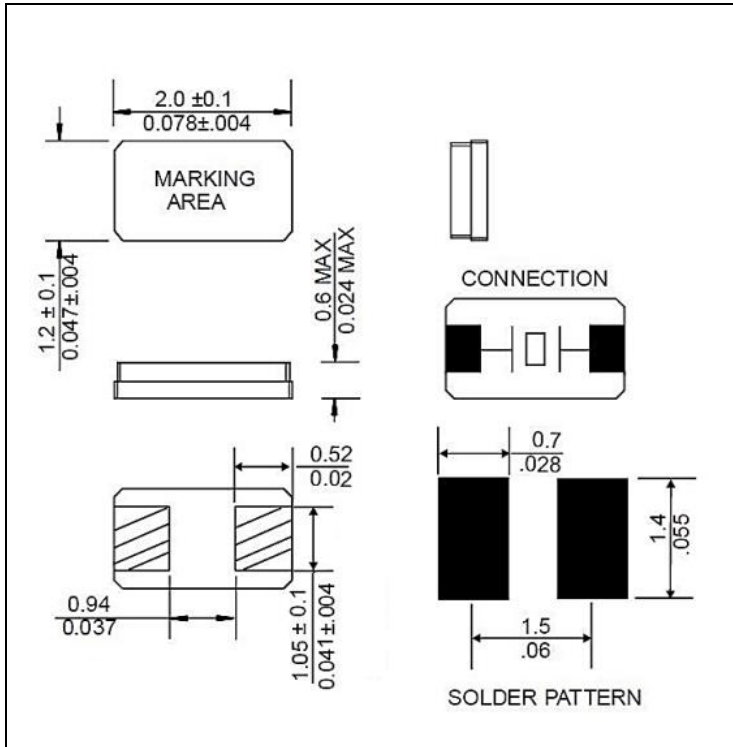
■ PART NUMBERING SYSTEM

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

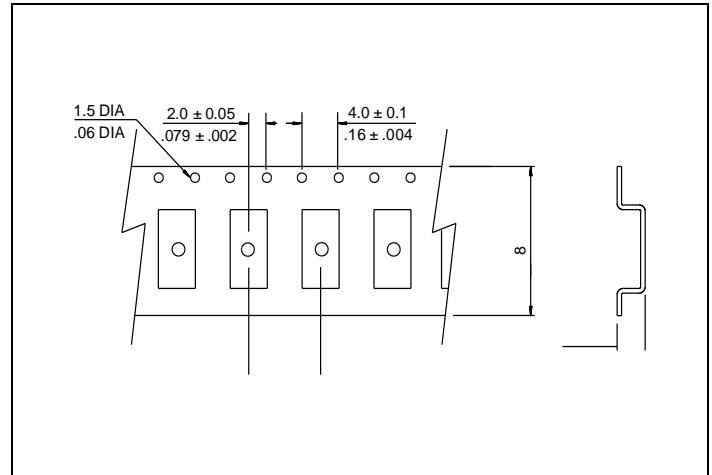
EXAMPLE: RT2012-32.768-12.5-20-EXT-TR

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



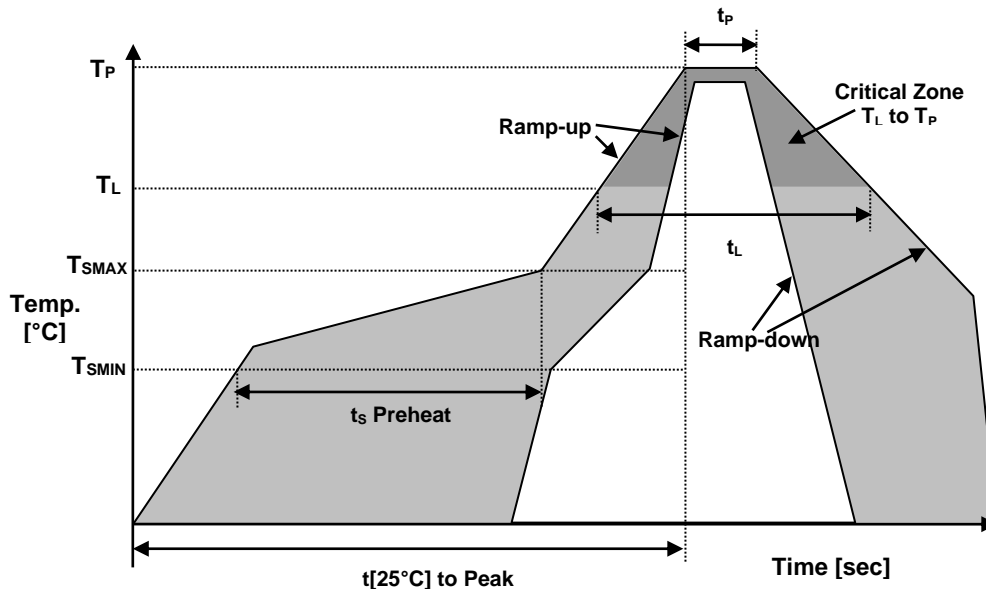
NOTE: REFER TO EIA-481 FOR DIMENSIONS

● 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	COMPLIANT
REACH SVHC	COMPLIANT
HALOGEN-FREE	COMPLIANT
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Au
UNIT WEIGHT (GRAMS)	0.051

