SERIES RT3215

FEATURES

- SUITABLE FOR TIME OF DAY CLOCKS
- IDEAL FOR HIGH DENSITY PACKAGING APPLICATION
- SMALL AND COMPACT PACKAGE

RoHS Compliant

SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 kHz
MODE OF OSCILLATION	FUNDAMENTAL
FREQUENCY TOLERANCE AT 25°C	±5, ±10, ±20 PPM
FREQUENCY STABILITY OVER TEMPERATURE COEFFICIENT	-0.04 PPM / $°C^2$
OPERATING TEMPERATURE RANGE	-40°C TO +85°C
STORAGE TEMPERATURE RANGE	-55°C TO +125°C
AGING	±3 PPM PER YEAR MAX
LOAD CAPACITANCE	6pF, 7pF , 9pF , 12.5 pF*
EQUIVALENT SERIES RESISTANCE	70 kΩ MAX
SHUNT CAPACITANCE	1.1 pF TYP
DRIVE LEVEL	0.5 µW MAX
SHOCK RESISTANCE	±5 PPM MAX 75 cm DROP TEST ONTO A HARD WOOD SURFACE
REFLOW CONDITIONS	260°C ±5°C FOR 10s MAX

***Note: Other values available**

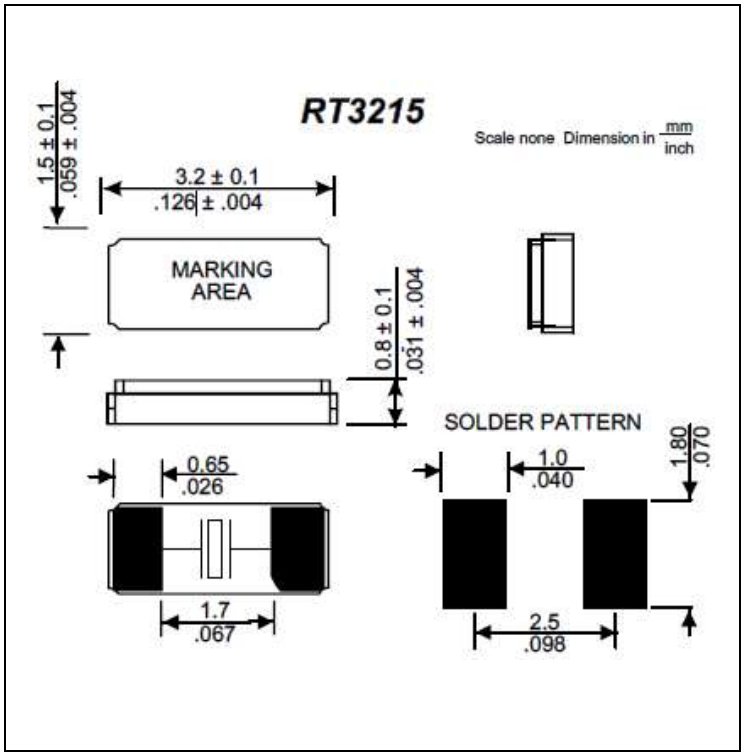
PART NUMBERING SYSTEM

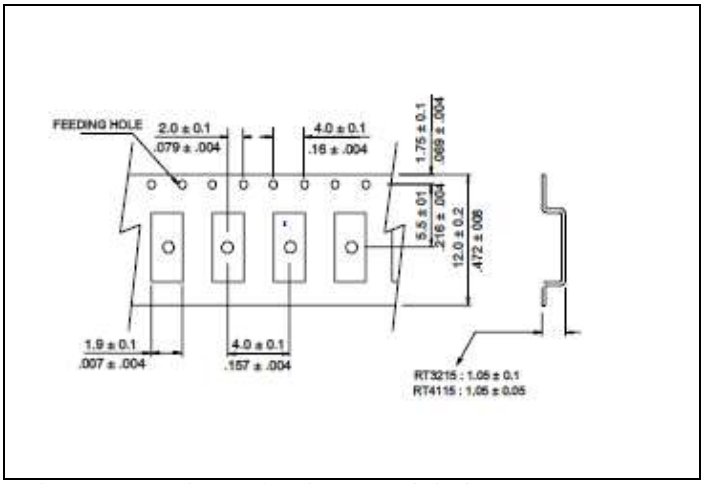
TYPE	-	FREQUENCY kHz	-	LOAD CAPACITANCE pF	-	TOLERANCE PPM	-	TAPE & REEL
RT3215	-	32.768	-	6 , 7 , 9 or 12.5	-	5 ,10 or 20	-	TR

EXAMPLE: RT3215-32.768-12.5-20-TR
Surface Mount Tuning Fork Crystal, 3.2 mm x 1.5 mm package, 32.768 kHz, 12.5 pF load, ±20 ppm Tolerance, Operating Temperature from -40°C to +85°C, Tape and Reel packaging

SERIES RT3215

MECHANICAL SPECIFICATION





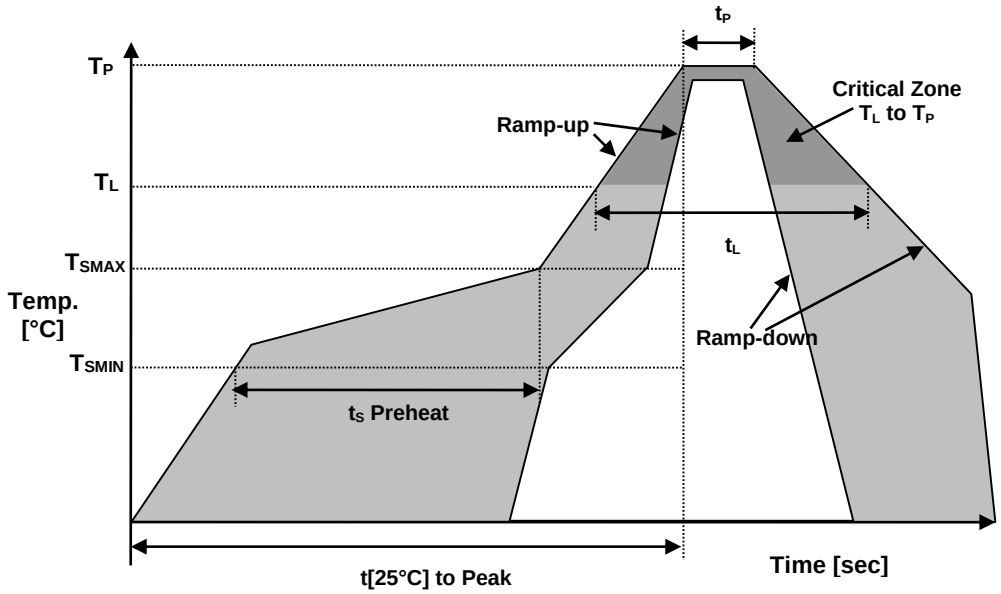
NOTE: REFER TO EIA-481 FOR DIMENSIONS

PACKAGING

180 mm REEL DIAMETER
12 mm TAPE WIDTH, 4mm PITCH
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°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	6/6 COMPLIANT & LEAD FREE
REACH SVHC	COMPLIANT
HALOGEN-FREE	COMPLIANT
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Au
UNIT WEIGHT (GRAMS)	0.051

Declaration of Conformity with Recast Directive 2011/65/EU
Certificate of Compliance

Reference: RT family of SMD Crystal

Raltron / RAMI Technology hereby certifies that the part(s)/product(s) listed above are compliant with the Recast Directive 2011/65/EU for the Restriction of the use of certain Hazardous Substances in electrical equipment as passed on July 21st, 2011. Any trace impurities of the RoHS substances in the part(s)/product(s) listed above are below the Recast specified levels.

The following table lists the restricted materials and their respective allowable limits:

Recast Restricted Substance	**Threshold Level** (at homogenous material level)
Cadmium (Cd)	0.01% or 100ppm
Hexavalent Chromium (Cr+6)	0.1% or 1000ppm
Lead (Pb)	0.1% or 1000ppm
Mercury (Hg)	0.1% or 1000ppm
Polybrominated Biphenyl (PBB)	0.1% or 1000ppm
Polybrominated Diphenyl Ether (PBDE)	0.1% or 1000ppm

August 2011

Alexandre Wolloch
President
Raltron/RAMI Technology