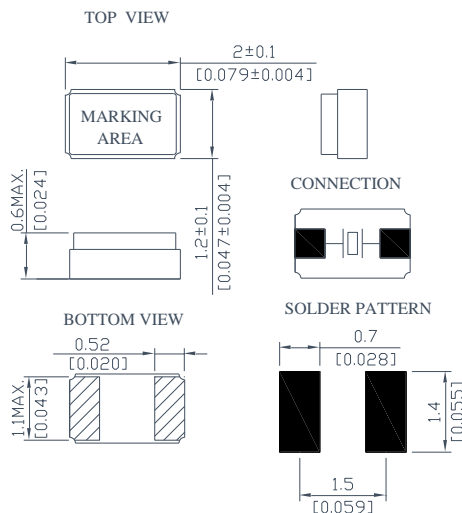


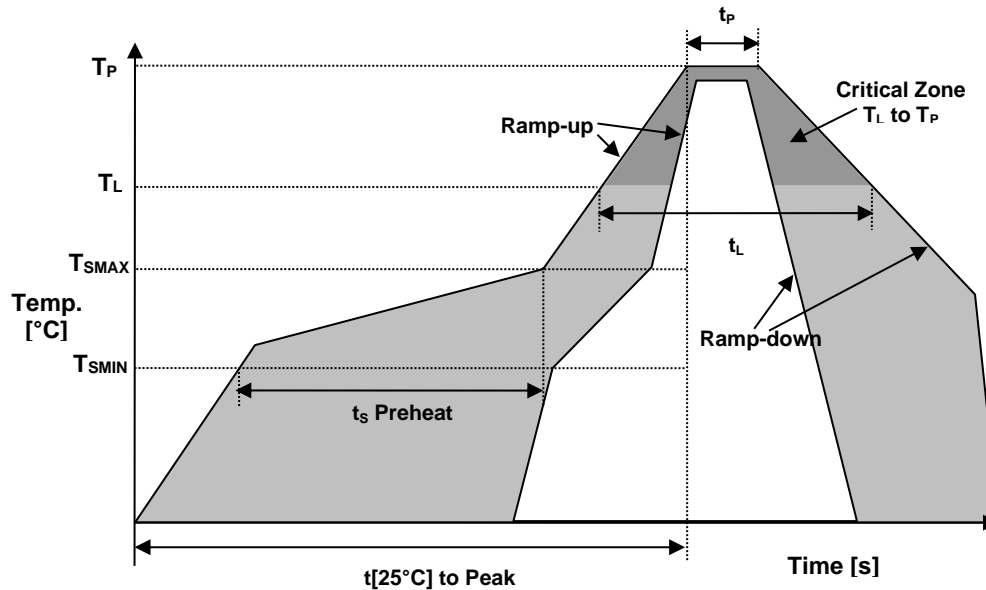
ELECTRICAL SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 kHz
FREQUENCY TOLERANCE AT 25°C	±20 PPM max
TURNOVER TEMPERATURE	25°C ± 5°C
PARABOLIC CURVATURE CONSTANT	-0.04 ppm/Δ°C ² ⇐
LOAD CAPACITANCE	12.5 pF
EQUIVALENT SERIES RESISTANCE	70 kΩ max ⇐
DRIVE LEVEL	0.5 μW max
SHUNT CAPACITANCE	1.5 pF max
AGING (FIRST YEAR)	±3 ppm first year max
INSULATION RESISTANCE	500M Ω min
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-55°C to +125°C

MECHANICAL SPECIFICATION



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/s max.
Ramp-down rate	R_{DOWN}	6°C/s max.
Time within 5°C of Peak Temperature	t_p	10 s
Time $t[25^\circ\text{C}]$ to Peak Temperature	$t[25^\circ\text{C}] \text{ to Peak}$	480 s
Time	t_L	60-150 s

ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	5/6 Compliant, Exemption 7a
REACH SVHC	Compliant
HALOGEN-FREE	Compliant
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Sn



APPROVAL

DRAWN BY:	KJackson, April 13, 2016
APPROVED BY:	KJackson, April 13, 2016
REVISION:	A, Initial Release
	B, ESR revised KJ 10/18/16
	C, Updated to current spec levels KJ 11/21/23



A **RAMI TECHNOLOGY** Company

TUNING FORK CRYSTAL

Page 3 of 3

RT2012-32.768-12.5-TR-NS1

Raltron Electronics/RAMI Technology USA, LLC, including its affiliates, employees, agents and other persons acting on its behalf (collectively Raltron/RAMI Tech), disclaim any and all liability for any errors or inaccuracies contained in this data sheet. While Raltron/RAMI Tech has made every reasonable effort to ensure the accuracy of all product information, specifications and data contained herein, Raltron/RAMI Tech does not guarantee that the information is accurate, reliable or current. The product information is provided for reference purposes only and is subject to change, correction or revision, at any time without notice. Raltron/RAMI Tech does not assume any liability arising out of an application or use of any product described herein and disclaims any warranties expressed or implied. The user of products in such applications shall assume all risks of such use and will agree to hold Raltron/RAMI Tech, harmless against all damages.