

TUNING FORK CRYSTAL

Page 1 of 3

RT2012-32.768-9-20-EXT-TR

SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 kHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±20 ppm max
FREQUENCY STABILITY OVER TEMPERATURE	-0.03 ±0.01 ppm/°C ²
AGING	±3 ppm pear year max
LOAD CAPACITANCE	9 pF
EQUIVALENT SERIES RESISTANCE	90 kΩ max
SHUNT CAPACITANCE	1.5 pF max
DRIVE LEVEL	0.5 μW typ
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-55°C to +125°C
SHOCK RESISTANCE	±5 ppm max 75 cm drop test in 3 axes onto a hard wood surface
REFLOW CONDITIONS	260°C ±5°C for 10s max

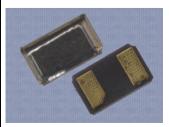
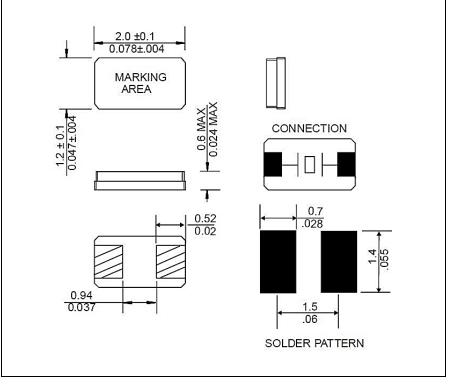


Photo is not actual part

MECHANICAL SPECIFICATION



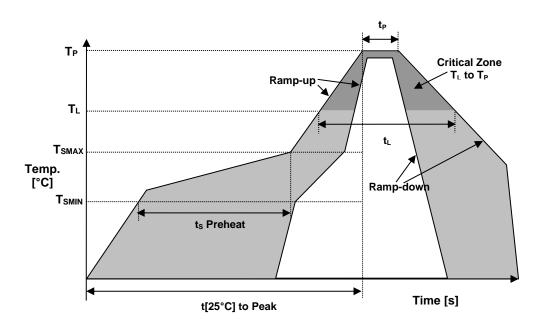


TUNING FORK CRYSTAL

Page 2 of 3

RT2012-32.768-9-20-EXT-TR

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	ΤL	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°C] to Peak Temperature	t[25°C] to Peak	480 s
Time	tL	60-150 s

ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	Compliant
REACH SVHC	Compliant
HALOGEN-FREE	Compliant
ESD CLASSIFICATION LEVEL	N/A





TUNING FORK CRYSTAL

Page 3 of 3

RT2012-32.768-9-20-EXT-TR

MARKING

Marking will be a single line of text from 4 to 8 digits. Marking characters are per production line and will be specific at the shipment level

APPROVAL

DRAWN BY:	LP, August 09, 2016
APPROVED BY:	CP, August 09, 2016
REVISION:	A, Initial Release B, Updated to current spec levels KJ 10/12/18 C, Updated to current spec levels XL 3/2/20 D, Updated to current spec levels AR 11/4/21

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 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 only for reference purposes only and is subject to change, correction or revision, at any time without notice. Raltron/RAMI Tech does not guarantee that the information is accurate, reliable 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.

Copyright © 2016, Raltron Electronics / RAMI Technology USA, LLC. All rights reserved. No part of this document may be reproduced in any form without the prior written permission of Raltron Electronics / RAMI Technology USA, LLC.