

● SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 kHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±20 ppm max
TURNOVER TEMPERATURE	+25 ± 5°C
TEMPERATURE COEFFICIENT	-0.04 ppm / °C <sup>2</sup> max
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-55°C to +125°C
AGING	±3 ppm first year max
LOAD CAPACITANCE	9 pF
EQUIVALENT SERIES RESISTANCE	70 kΩ max
SHUNT CAPACITANCE	1.1 pF typ
DRIVE LEVEL	0.5 μW max
REFLOW CONDITIONS	260°C for 10 sec max
INSULATION RESISTANCE	500 MΩ min @ DC 100V

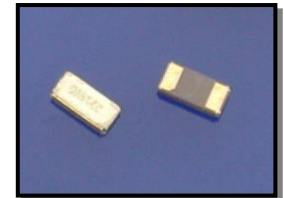
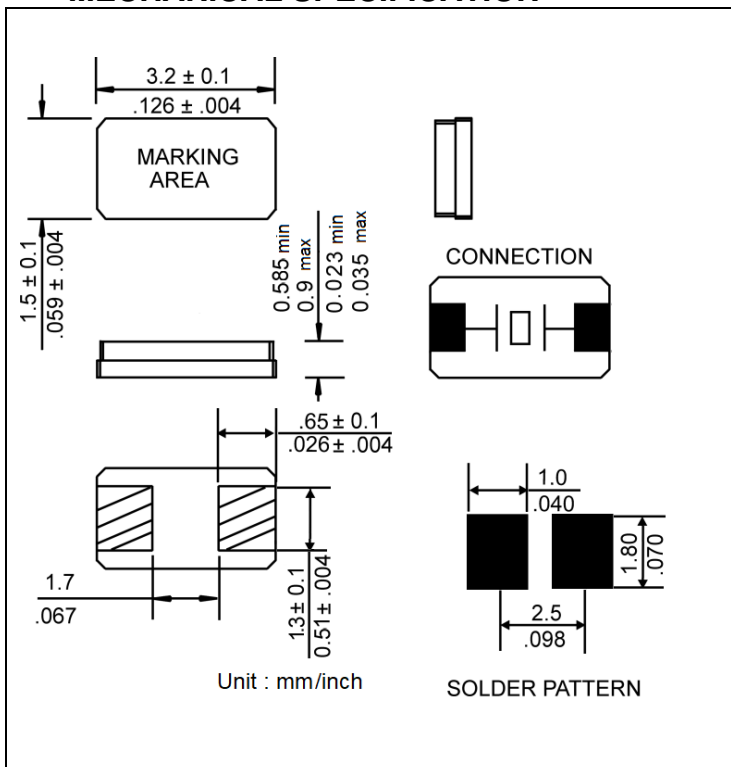
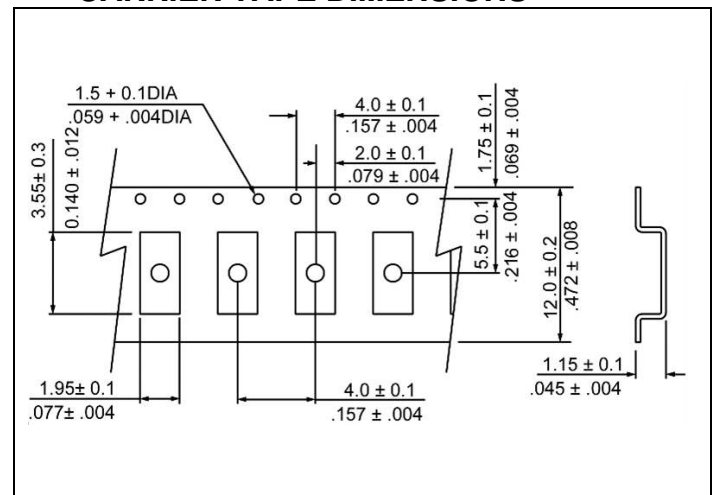


Photo not actual part

● MECHANICAL SPECIFICATION



● CARRIER TAPE DIMENSIONS



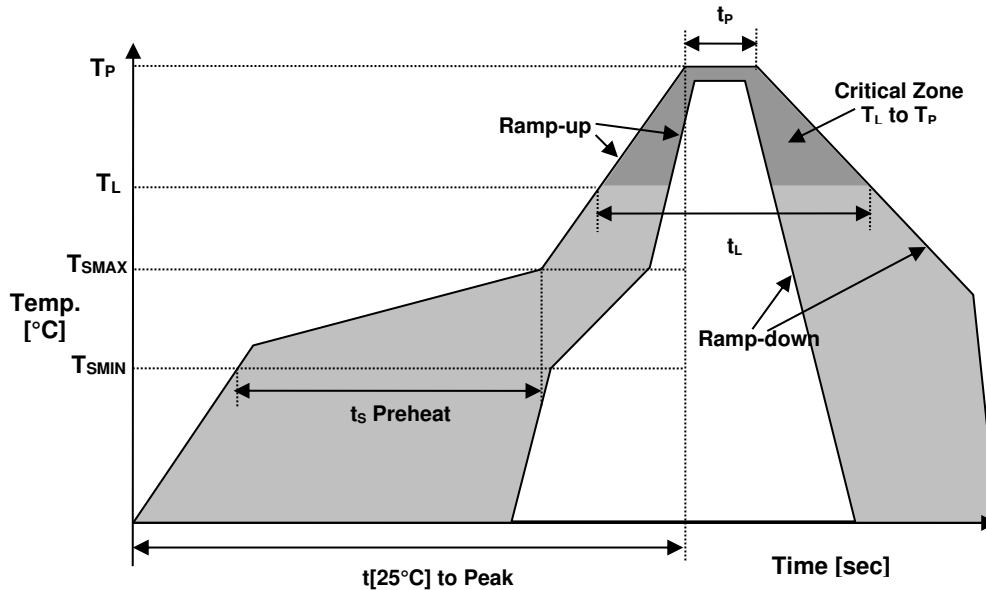
NOTE: REFER TO EIA-481 FOR DIMENSIONS

● PACKAGING

180 mm REEL DIAMETER  
 12 mm TAPE WIDTH, 4 mm PITCH  
 QUANTITY: 3000 PIECES PER REEL

IN ACCORDANCE WITH EIA-481

● 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/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



## • MARKING

Xywwx

X – Internal Production ID code (J, R, T, Y, M, R, N)  
y – Year code  
ww – Week code  
x – 1 or 2 digits as Lot code

ymxxx

y – Year code  
m – Month code, Jan ~ Sep: 1 ~ 9, Oct: X Nov: Y Dec: Z  
xxx – Lot code

XLzymb

X – Internal Production ID code (J, R, T, Y, M, R, N)  
L – Load capacitance code (A: 12.5pF B: 9pF C: 7pF Z: others )  
z – Lot code  
y – Year code  
m – Month code, Jan ~ Sep: 1 ~ 9, Oct: X Nov: Y Dec: Z  
d – Day code

XzymF<sub>xx</sub><sup>xx</sup>

X – Internal Production ID code (J, R, T, Y, M, R, N)  
z – Frequency code  
y – Year code  
m – Month code, Jan ~ Sep: 1 ~ 9, Oct: X Nov: Y Dec: Z  
<sub>xx</sub> – Lot code



A RAMI TECHNOLOGY Company

● APPROVAL

Drawn By:	KJackson, Sept. 15, 2014
Approved By:	KJackson, Sept. 15, 2014
Revision:	A, Initial Release B: CP, February 05,2016; Corrected Tape Width to12mm; Peak Temperature 260°C C: KJ 5/15/17 Updated to current spec levels D, Updated to current spec levels by XLiu, August 20, 2019 E, Updated to current spec levels by XLiu, May 21, 2020 F, AR January 07, 2021 Updated the Carrier Tape Dimensions

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 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.

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.