

SURFACE MOUNT CRYSTAL

Page 1 of 3

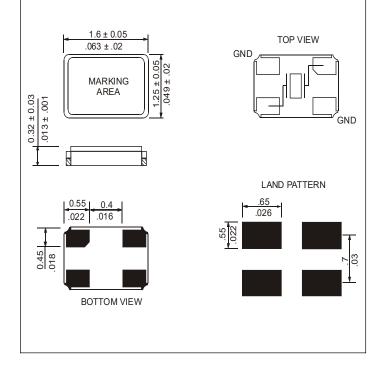
R1612-32.000-10-F-1530-TR

SPECIFICATIONS

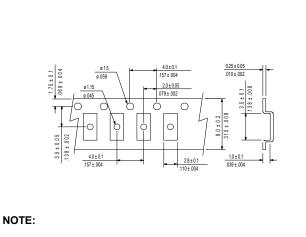
PARAMETER	VALUE	
NOMINAL FREQUENCY	32.000 MHz	
MODE OF OSCILLATION	Fundamental	
FREQUENCY TOLERANCE AT 25°C	±15 ppm max	
FREQUENCY STABILITY OVER TEMPERATURE	±30 ppm max	
OPERATING TEMPERATURE RANGE	-10°C to +60°C	
STORAGE TEMPERATURE RANGE	-40°C to +85°C	
AGING	±2 ppm per year max	
LOAD CAPACITANCE	10 pF	
EQUIVALENT SERIES RESISTANCE	150 Ω max	
SHUNT CAPACITANCE	3 pF max	
DRIVE LEVEL	50 μW max	
REFLOW CONDITIONS	260°C for 10 sec max	



MECHANICAL SPECIFICATION



CARRIER TAPE DIMENSIONS



REFER TO EIA-481 FOR NON-SPECIFIED DIMENSIONS

PACKAGING

180 mm REEL DIAMETER 8 mm TAPE WIDTH, 4 mm PITCH QUANTITY: 3000 PIECES PER REEL

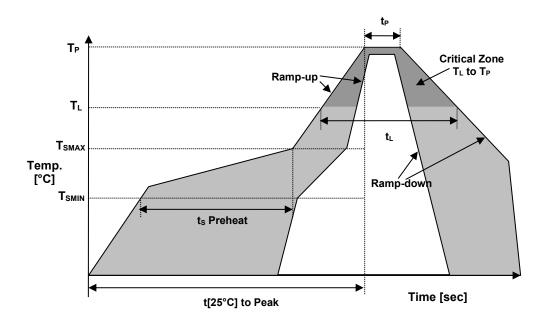
IN ACCORDANCE WITH EIA-481



Page 2 of 3

R1612-32.000-10-F-1530-TR

REFLOW PROFILE



Reflow profile				
Temperature Min Preheat	ature Min Preheat T _{SMIN} 150°C			
Temperature Max Preheat	T _{SMAX}	200°C		
Time (T _{SMIN} to T _{SMAX})	ts	60-180 sec.		
Temperature	TL	217°C		
Peak Temperature	TP	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	tL	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





SURFACE MOUNT CRYSTAL

Page 3 of 3

R1612-32.000-10-F-1530-TR

MARKING

R320 KHyw

- x Internal Production ID code
- y Year code
- w Week code

YEAR CODE		
Year	Code	
2015	5	
2016	6	
2017	7	
2018	8	
2019	9	
2020	0	
2021	1	
2022	2	
2023	3	
2024	4	
2025	5	

ALPHA WEEK CODE TABLE					
Week	Code	Week	Code	Week	Code
1	а	19	s	37	K
2	b	20	t	38	L
3	с	21	u	39	М
4	d	22	v	40	Ν
5	e	23	w	41	0
6	f	24	х	42	Р
7	g	25	у	43	Q
8	h	26	Z	44	R
9	i	27	А	45	S
10	j	28	В	46	Т
11	k	29	С	47	U
12	1	30	D	48	V
13	m	31	Е	49	W
14	n	32	F	50	Х
15	0	33	G	51	Y
16	р	34	Н	52	Z
17	q	35	Ι		
18	r	36	J		

APPROVAL

DRAWN BY:	XLiu, January 31, 2019
APPROVED BY:	Jlvens, January 31, 2019
REVISION:	A, Initial Release

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 hose 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 hose successure any uservation is accurate, reliable 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.