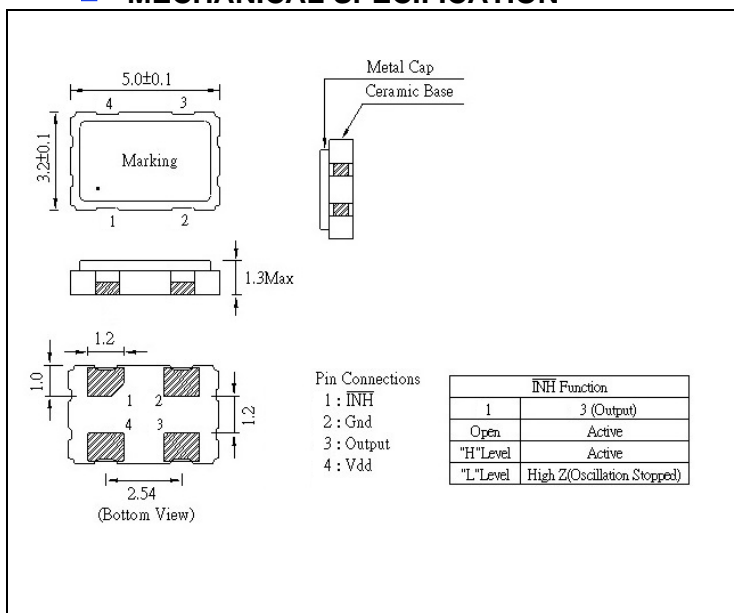


ELECTRICAL SPECIFICATION

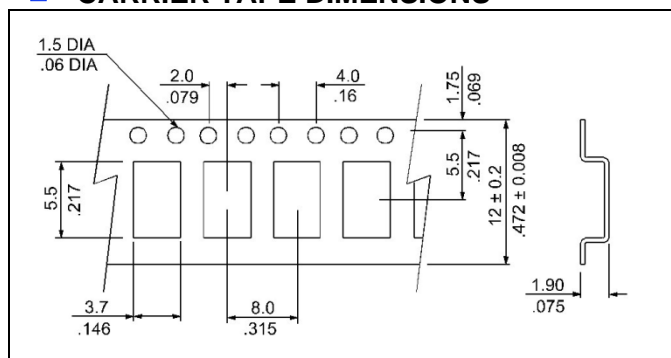
PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	f_o	$T_a=25^{\circ}\text{C}$	24.000	MHz
Supply Voltage Range	V_{CC}	$V_{CC} \pm 10\%$	3.3	VDC
Supply Current, max	I_s	$T_a=25^{\circ}\text{C}$	20	mA
Operating Temperature Range	T_a		-40 ~ +85	$^{\circ}\text{C}$
Storage Temperature Range	$T_{(stg)}$	Absolute max	-55 ~ +125	$^{\circ}\text{C}$
Frequency Stability	$\Delta f/f_o$	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load and Aging	± 50	ppm
Output Voltage	V_{OL}	Logic "0" Level	$0.1 \times V_{CC}$	VDC
	V_{OH}	Logic "1" Level	$0.9 \times V_{CC}$	VDC
Output Load		CMOS Output	15	pF
Enable / Disable Function	E/D	Pin 1: N.C. (Open) or High, Pin 3 – Oscillation (Enabled), min	$0.7 \times V_{CC}$	V
		Pin 1: Low, Pin 3 – High Impedance (Disabled), max	$0.3 \times V_{CC}$	V
Symmetry (Duty Cycle)	DC	@50% Vdd	45 ~ 55	%
Rise Time and Fall Time, max	t_r / t_f	@10% to 90% Vdd	5	ns
Jitter, RMS, max	J	@ $12\text{kHz} < F_j < 20\text{MHz}$	0.45	ps
Stand-by Current, max	$I_{(std-by)}$		10	μA

MECHANICAL SPECIFICATION



NOTE: A capacitor of 0.01 μF between Vcc and Ground is recommended

CARRIER TAPE DIMENSIONS

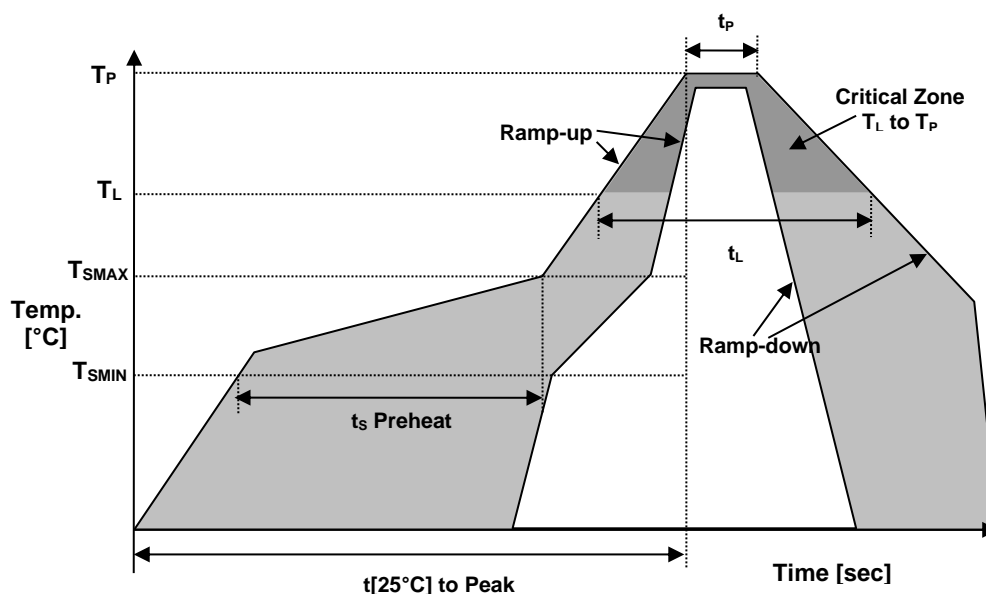


NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED

PACKAGING

178 mm REEL DIAMETER
24 mm TAPE WIDTH, 4 mm PITCH
QUANTITY: 1000 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°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	Compliant
REACH-SVHC	Compliant
HALOGEN-FREE	Compliant
TERMINATION FINISH	Au



MARKING

Rx24.000T

•3BEyw

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	a	19	s	37	K
2	b	20	t	38	L
3	c	21	u	39	M
4	d	22	v	40	N
5	e	23	w	41	O
6	f	24	x	42	P
7	g	25	y	43	Q
8	h	26	z	44	R
9	i	27	A	45	S
10	j	28	B	46	T
11	k	29	C	47	U
12	l	30	D	48	V
13	m	31	E	49	W
14	n	32	F	50	X
15	o	33	G	51	Y
16	p	34	H	52	Z
17	q	35	I		
18	r	36	J		

APPROVAL

RALTRON	
DRAWN BY:	KJackson, June 11, 2015
APPROVED BY:	KJackson, June 11, 2015
REVISION:	A, Initial Release B, Updated to current spec levels by XLiu, March 27, 2020 C, CP, September 03, 2021 Added Jitter value D, CP, September 27, 2021 Corrected the Rise/Fall Time Value E, CP, April 28, 2023, Updated to the current spec levels

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.

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.