

● SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	40.000 MHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±10 ppm max
FREQUENCY STABILITY OVER TEMPERATURE	±10 ppm max
OPERATING TEMPERATURE RANGE	-30°C to +85°C ↔
STORAGE TEMPERATURE RANGE	-40°C to +85°C
AGING	±2 ppm first year max
LOAD CAPACITANCE	12 pF
EQUIVALENT SERIES RESISTANCE	15 Ω max ↔
SHUNT CAPACITANCE	2 pF max
DRIVE LEVEL	200 μW max
INSULATION RESISTANCE	500 MΩ min @ DC 100V

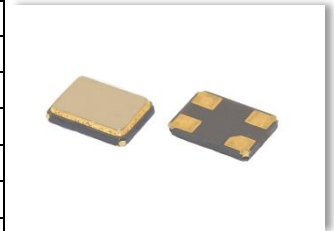
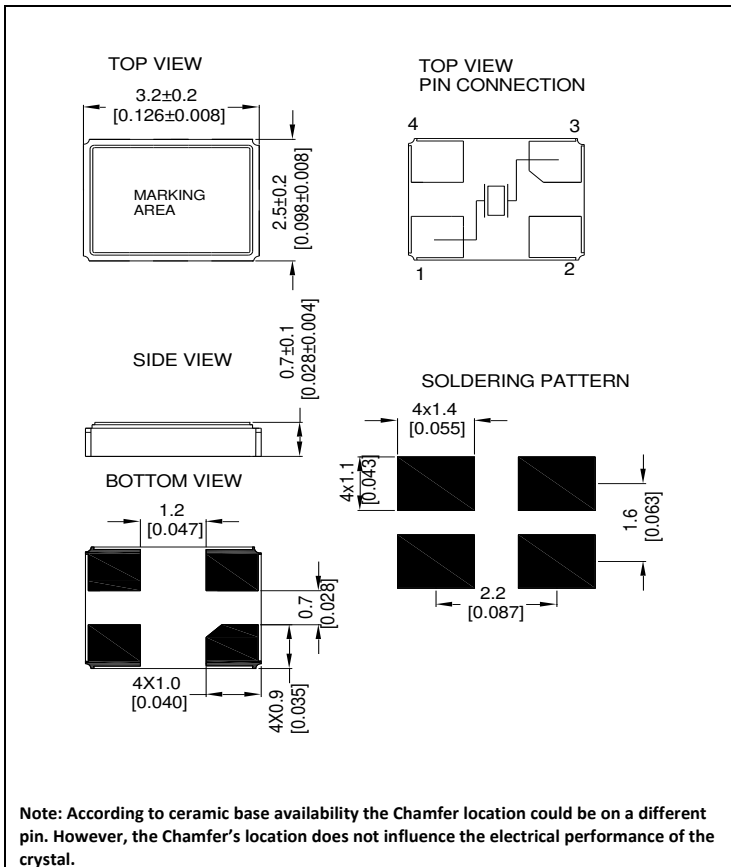
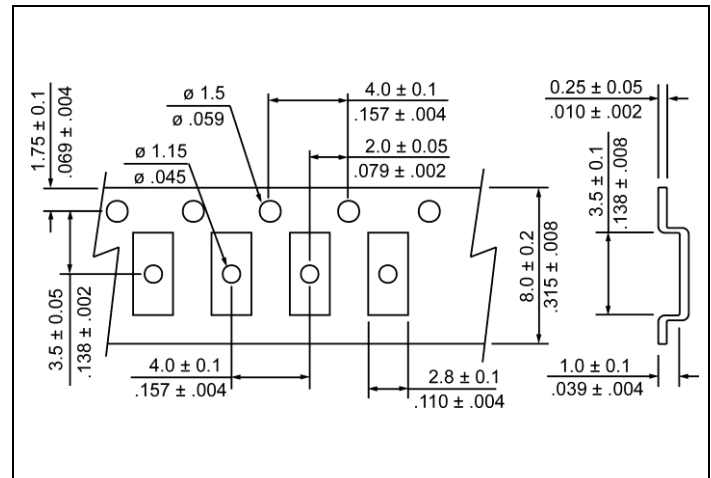


Photo is not actual part

● MECHANICAL SPECIFICATION



● CARRIER TAPE DIMENSIONS



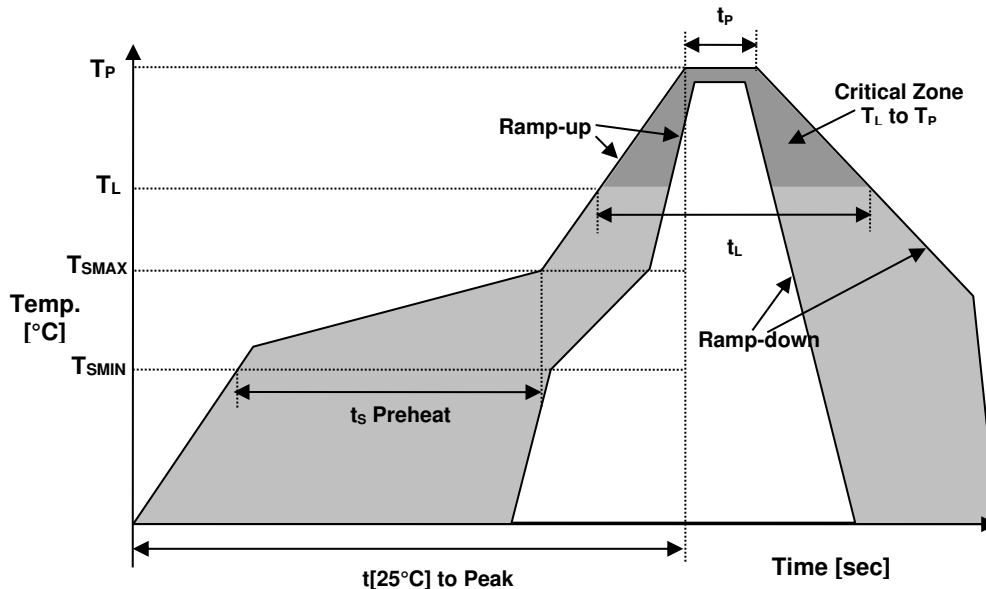
NOTE: REFER TO EIA-481 FOR DIMENSIONS

● PACKAGING

178 mm REEL DIAMETER
8 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 $t[25°C]$ 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
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Au





MARKING

R40.000
xJEyw

x – 1 or 2 Digits as Internal Production ID code
y – Year code
w – Week code

YEAR CODE	
Year	Code
2018	8
2019	9
2020	0
2021	1
2022	2
2023	3
2024	4
2025	5
2026	6
2027	7
2028	8
2029	9

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

DRAWN BY	XLiu, January 26 2022
APPROVED BY	CP, January 26, 2022
REVISION	A, Initial Release
	C, Added reliability conditions by XLiu, December 6, 2022

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 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.

■ RELIABILITY SPECIFICATIONS

Test Item	Test Methods/Conditions	Test Criteria	Reference
Drop Test	50cm for 2 times on hardWood.	Δ Freq. $\leq \pm 10$ ppm, Δ ESR $\leq \pm 3\Omega$ or 20% Good hermetically	IEC68-2-32 Free Fall
Vibration	Frequency: 20 to2000Hz, full wave Amplitude: 1.5 mm (Peak to Peak) Sweep/Cycle: 2 minutes Direction:X,Y,Z Duration: 4min ,4 times in each direction:48min	Δ Freq. $\leq \pm 10$ ppm, Δ ESR $\leq \pm 3\Omega$ or 20% Good hermetically	IEC68-2-6 MIL-STD-883H METHOD 2007.3 Condition A
Solderability	Temperature: 235 \pm 5 $^{\circ}$ C Time: 2 \pm 0.2 sec	Pinhole,void and porosity, where the area must less than 5%. Good hermetically 4 H12 Hrs)	MIL-STD-202 Method 210B Condition B All Frequency test adopt series mode
Aging	100 $^{\circ}$ C \pm 5 $^{\circ}$ C for 168 hours	Δ Freq. $\leq \pm 10$ ppm, Δ ESR $\leq \pm 3\Omega$ or 20% Good hermetically	IEC 60068-2-2 (GB/T2423.2- 2008) MIL-STD-883H Method 1008.2
Fine Leak	Helium Bombing:0.4~0.5MPa Time:1 hour	Helium Bombing:0.4~0.5MPa Time:1 hour	MIL-STD-883H METHOD 1014.13
High Temp Storage	Temperature: 85 $^{\circ}$ C \pm 5 $^{\circ}$ C Time 96 hours	Δ Freq. $\leq \pm 10$ ppm, Δ ESR $\leq \pm 3\Omega$ or 20% Good hermetically	IEC 60068-2-2 (GB/T2423.2- 2008)
Temperature Cycle	25 $^{\circ}$ C \pm 3 $^{\circ}$ C for 10 minutes -40 $^{\circ}$ C \pm 3 $^{\circ}$ C for 10 minutes 25 $^{\circ}$ C \pm 3 $^{\circ}$ C for 10 minutes 125 $^{\circ}$ C \pm 3 $^{\circ}$ C for 10 minutes 20 cycles	Δ Freq. $\leq \pm 10$ ppm, Δ ESR $\leq \pm 3\Omega$ or 20% Good hermetically	MIL-STD-883H METHOD 1010.8

RH100-40.000-12-F-1010-TR-NS6

Resistance to Soldering Heat	Pre-Heating:125°C 60~120 Seconds Solder temperature: 260± 5°C Time: 10±1 sec	Δ Freq.≤±10ppm, Δ ESR ≤±3Ω or 20% Good hermetically	MIL-STD-202 Method 210B Condition B
Humidity	Temperature: 40°C ±3°C Relative Humidity: 90%~95% Time: 96 hours.	Δ Freq.≤±10ppm, Δ ESR ≤±3Ω or 20% Good hermetically	IEC 60068-2-3 Damp Heat (GB/T2423.3-2006)
Thermal Shock	-40°C ± 3°C to 100°C ± 3°C, soak 15 minutes at each point, transfer time within 15 seconds, 20 cycles.	Δ Freq.≤±10ppm, Δ ESR ≤±3Ω or 20% Good hermetically	IEC 60068-2-14 (GB/T 2423.22 -2002) MIL-STD-883HMETHOD 1011.9
Low Temp Storage	-40°C±3°C for 96 hours.	Δ Freq.≤±10ppm, Δ ESR ≤±3Ω or 20% Good hermetically	IEC68-2-1 (GB/T2423.1- 2008)
IR Reflow	Pre-Heating:150°C to 200°C, 60-120 secs Heating:217°C, 60 to 150 secs Peak temp: 260°C±5°C, 20±5 secs	Δ Freq.≤±10ppm, Δ ESR ≤±3Ω or 20% Good hermetically	JEDEC J-STD-020C
Salt Spray	35+/-2°C, 5%salt spray for 24hrs	No corrosion	MIL-STD-883H Method 1009.8 Condition A