

LVDS CLOCK OSCILLATOR

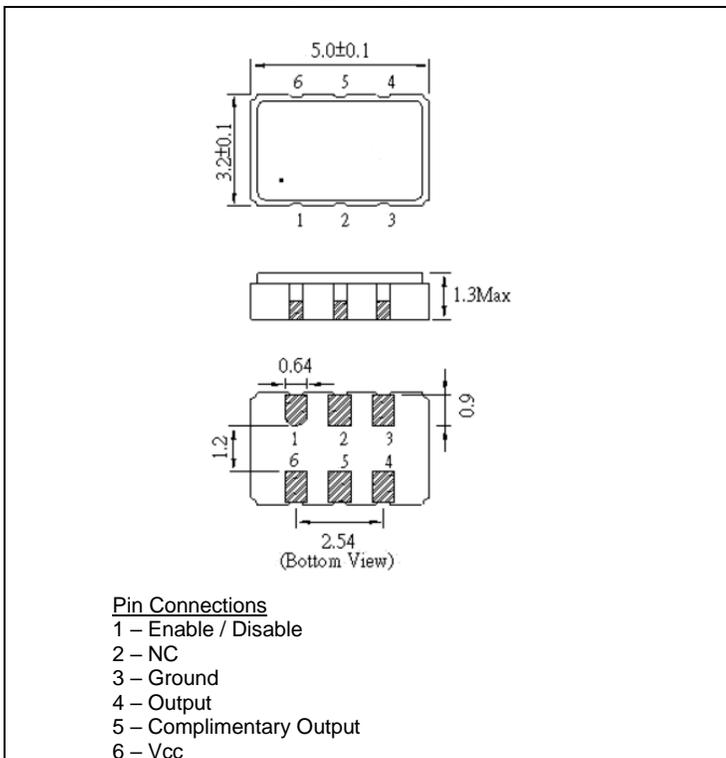
Page 1 of 3

CL5032-100.000-3.3-25-X-T-TR

ELECTRICAL SPECIFICATION

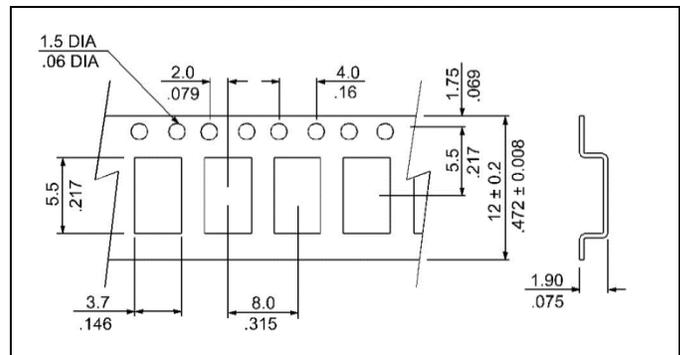
PARAMETER	SYMBOL		VALUE	UNIT
Nominal Frequency	f_o	$T_a=25^{\circ}\text{C}$	100.000	MHz
Supply Voltage	V_{CC}	$V_{CC} \pm 5\%$	3.3	VDC
Supply Current, max	I_s	$T_a=+25^{\circ}\text{C}$	60	mA
Operating Temperature Range	T_a		-40 ~ +85	$^{\circ}\text{C}$
Storage Temperature	$T_{(stg)}$	Absolute max	-55 ~ +125	$^{\circ}\text{C}$
Output Logic Type			LVDS	
Overall Freq. Stability, max	$\Delta f/f_o$	Inclusive of 25°C Tolerance and Changes due to Operating Temperature	± 25	ppm
Differential Output Voltage, min/max	V_{OD}		247 / 454	mV
VOD Magnitude Change, max	ΔV_{OD}		50	mV
Offset Voltage, min/max	V_{OS}		1.125 / 1.375	V
VOS Magnitude Change, max	ΔV_{OS}		50	mV
Output Load		Connected between Out and Complementary Out	100	Ω
Enable / Disable Function	E/D	Pin 1: N.C. (Open) or High ($0.7 \times V_{CC}$) Pin 1: Low ($0.3 \times V_{CC}$)	Pin 4 & 5 – Oscillation (Enabled) Pin 4 & 5 – High Impedance (Disabled)	
Symmetry (Duty Cycle)	DC	@50% Waveform	45 ~ 55	%
Start-up Time, max	t_s	$V_{OUT} \geq 90\% V_{P-P}$	10	ms
Rise Time and Fall Time, max	t_r / t_f	@20% to 80% Waveform	1	ns
RMS Phase Jitter, max		Offset frequency: $12\text{kHz} < F_j < 20\text{MHz}$	1	ps

MECHANICAL SPECIFICATION



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

CARRIER TAPE DIMENSIONS

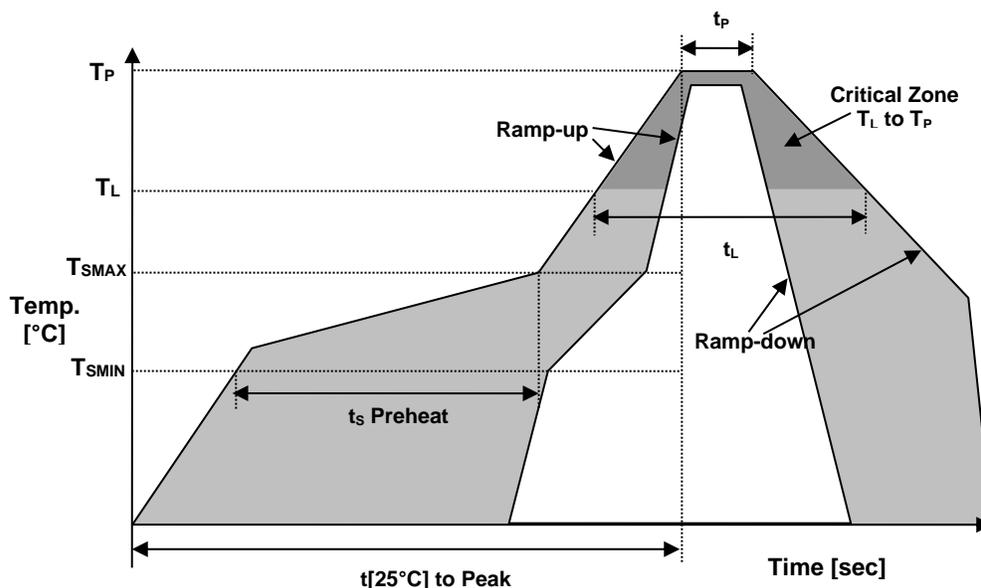


NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED

PACKAGING

178 mm REEL DIAMETER
 12 mm TAPE WIDTH, 8 mm PITCH
 QUANTITY: 1000 PIECES PER REEL

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

Rx100.0T

•3AEyw

x – 1 or 2 digits 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

RALTRON	
DRAWN BY:	AR, January 18, 2019
APPROVED BY:	CP, January 18, 2019
REVISION:	A, Initial Release B, Updated to current spec levels by X Liu, October 17, 2022 C, Updated to current spec levels by AR, April 11, 2024

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.