

## LVDS CLOCK OSCILLATOR

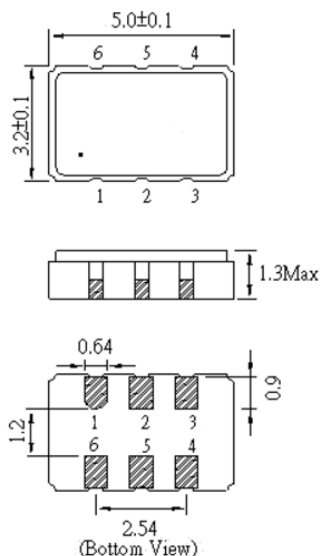
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CL5032-250.000-2.5-25-X-T-TR

### ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	$f_o$	$T_a=25^{\circ}\text{C}$	250.000	MHz
Supply Voltage	$V_{CC}$	$V_{CC} \pm 5\%$	2.5	VDC
Supply current, max	$I_s$	$V_{CC}; T_a=+25^{\circ}\text{C};$	60	mA
Operating Temperature Range	$T_a$	---	-40 to +85	$^{\circ}\text{C}$
Storage temperature	$T_{(stg)}$	Absolute max	-55 to +125	$^{\circ}\text{C}$
Output Logic Type	---		LVDS	
Overall Freq. Stability, Max.	$\Delta f/f_o$	Inclusive of $25^{\circ}\text{C}$ Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging, Shock and Vibration	$\pm 25$	ppm
Output Voltage	$V_{OL}$	Logic "0" Level	0.9 Min	VDC
	$V_{OH}$	Logic "1" Level	1.6 Max	VDC
Output Load	---	Connected between Out and Complementary Out	100	$\Omega$
Enable / Disable Function	E/D	Pin 1: N.C. (Open) or High ( $0.7 \times V_{CC}$ )	Pin 4 & 5 – Oscillation (Enabled)	
		Pin 1: Low ( $0.3 \times V_{CC}$ )	Pin 4 & 5 – High Impedance (Disabled)	
Symmetry (Duty Cycle)	DC	@50% Vdd	45 to 55	%
Rise Time and Fall Time	$t_r / t_f$	@20% to 80% Vdd	1.0	ns
Jitter, RMS, max.	J	$1\sigma, 12\text{kHz} < F_j < 20\text{MHz}$	1.0	ps

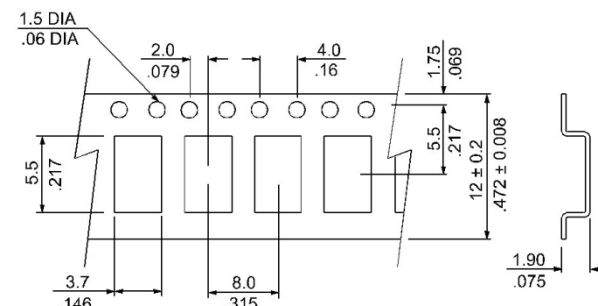
### MECHANICAL SPECIFICATION



#### Pin Connections

- 1 – Enable / Disable
- 2 – NC
- 3 – Ground
- 4 – Output
- 5 – Complimentary Output
- 6 – Vcc

### CARRIER TAPE DIMENSIONS



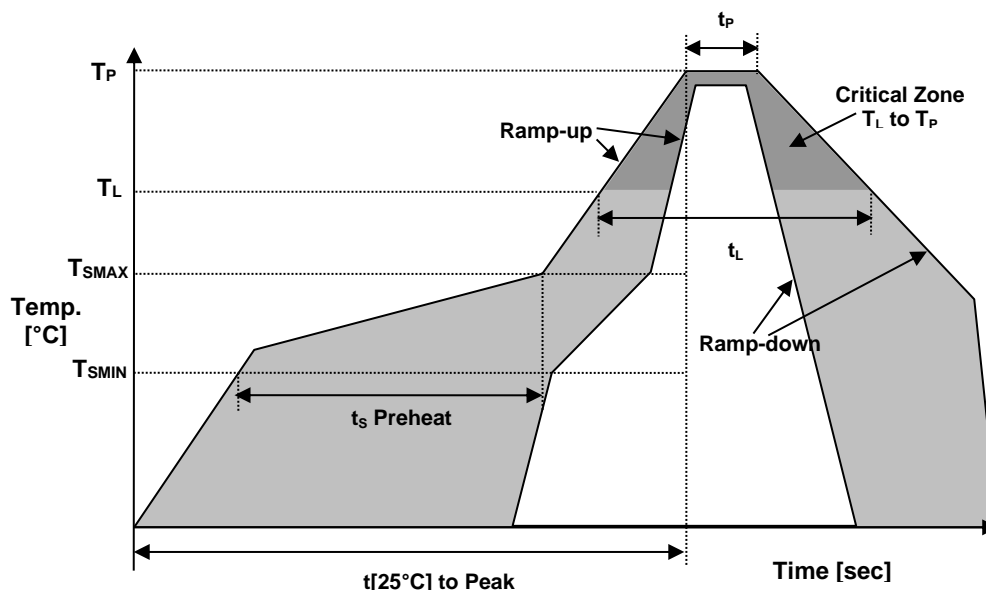
NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED

### PACKAGING

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

NOTE: A capacitor of 0.01  $\mu\text{F}$  between Vcc and Ground is recommended

### REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	T <sub>S</sub> MIN	150°C
Temperature Max Preheat	T <sub>S</sub> MAX	200°C
Time (T <sub>S</sub> MIN to T <sub>S</sub> MAX)	t <sub>S</sub>	60-180 sec.
Temperature	T <sub>L</sub>	217°C
Peak Temperature	T <sub>P</sub>	260°C
Ramp-up rate	R <sub>UP</sub>	3°C/sec max.
Ramp-down rate	R <sub>DOWN</sub>	6°C/sec max.
Time within 5°C of Peak Temperature	t <sub>P</sub>	10 sec.
Time t[25°C] to Peak Temperature	t[25°C] to Peak	480 sec.
Time	t <sub>L</sub>	60-150 sec.

### ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	Compliant
REACH-SVHC	Compliant
HALOGEN-FREE	Compliant
TERMINATION FINISH	Au



#### MARKING

Rx250.0  
•2AEyw

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:	AR, January 18, 2019
APPROVED BY:	CP, January 18, 2019
REVISION:	A, Initial Release

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