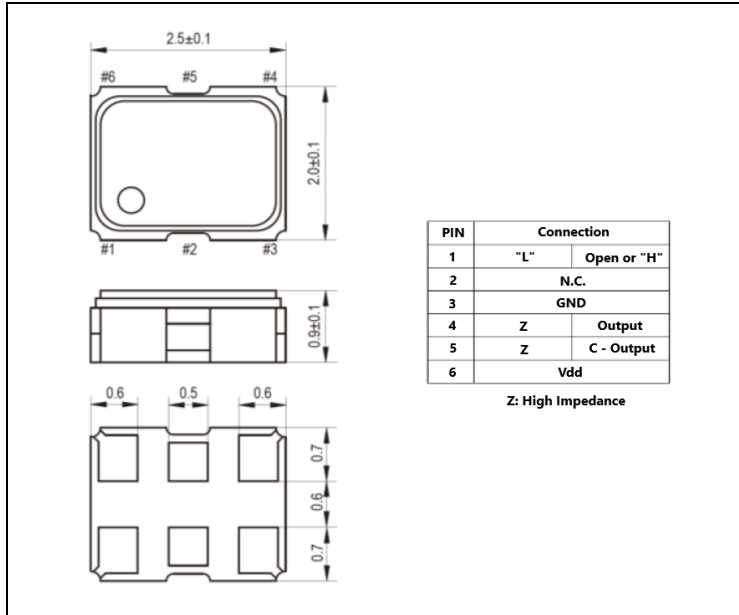


#### ■ ELECTRICAL SPECIFICATION

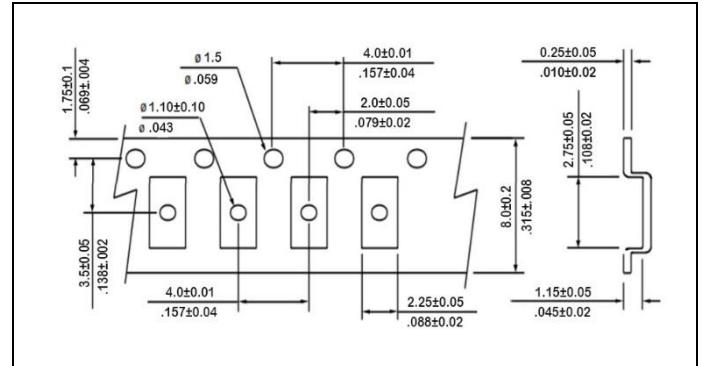
PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo	Ta=25°C	312.500	MHz
Oscillation Mode			3 <sup>rd</sup> Overtone	
Supply Voltage	V <sub>CC</sub>	V <sub>CC</sub> ±5%	2.5	VDC
Current Consumption, max	I <sub>CC</sub>		35	mA
Operating Temperature Range	Ta	---	-40 ~ +85	°C
Storage Temperature Range	T <sub>(stg)</sub>	Absolute max	-55 ~ +125	°C
Output Logic Type	---		LVDS	
Freq. Stability, max	Δf/fo	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging	±50	ppm
Output Voltage	V <sub>OL</sub>	Logic "0" Level, min/typ	0.90/1.10	VDC
	V <sub>OH</sub>	Logic "1" Level, typ/max	1.43/1.60	VDC
Output Load	---	Out/OutN	100	Ω
Enable / Disable Function	E/D	Pin 1: High, Pins 4 & 5 – Oscillation (Enabled), min	0.7 x V <sub>CC</sub>	V
		Pin 1: Low, Pins 4 & 5 – High Impedance (Disabled), max	0.3 x V <sub>CC</sub>	V
Differential Output Voltage, min/typ			247/330	mV
Differential Output Error, max			50	mV
Symmetry (Duty Cycle)	DC	@50% Wave Form	45 ~ 55	%
Output Offset Error, max			50	mV
Offset Voltage, min/typ/max	V <sub>OS</sub>		1.125/1.25/1.375	V
Stand By Current, max	I <sub>stand</sub>		30	μA
Enable Delay Time, max			10	ms
Disable Delay Time, max			200	ns
Rise Time and Fall Time, max	tr / tf	@20% to 80% Wave Form	300	ps
Start up Time, max	t <sub>start</sub>		10	ms
Phase Jitter, typ/max	J	1σ, 12kHz < F <sub>j</sub> < 20MHz	30/50	fs

### CL2520-312.500-2.5-50-X-T-TR

#### MECHANICAL SPECIFICATION



#### CARRIER TAPE DIMENSIONS

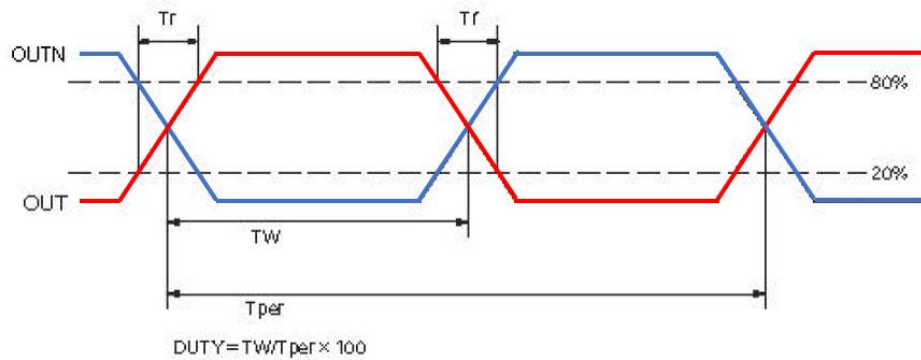


NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED

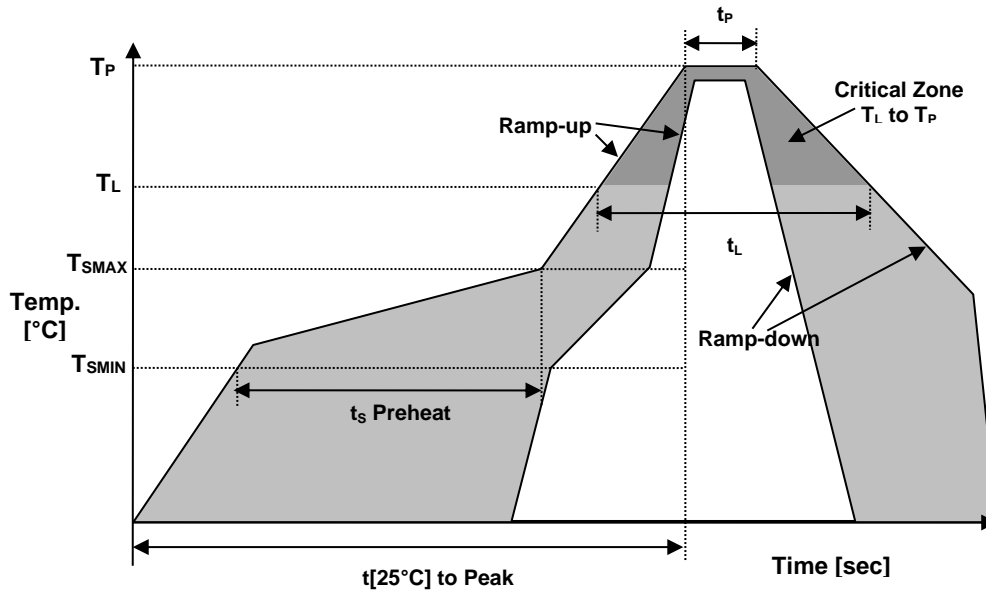
#### PACKAGING

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

#### OUTPUT WAVEFORM



#### 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

Rx312  
•2BEyw

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

YEAR CODE	
Year	Code
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		
18	r	36	J		

#### APPROVAL

RALTRON	
DRAWN BY:	JS, November 19, 2024
APPROVED BY:	CP, November 19, 2024
REVISION:	A, Initial Release B, Corrected Mode of Oscillation JS, 01/06/25

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