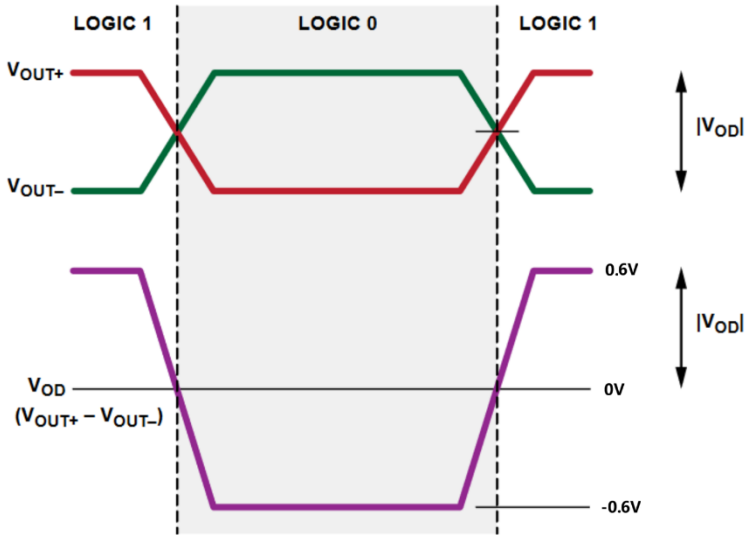
CLFH2016-312.500-3.3-20-6-T-N7



ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo		312.500	MHz
Oscillation Mode			Fundamental	-
Supply Voltage	V_{CC}	Vcc±5%	3.3	VDC
Supply Current, max			38	mA
Operating Temperature Range	Ta	---	-40 ~ +105	°C
Storage Temperature Range	$T_{(stg)}$	Absolute max	-55 ~ +125	°C
Output Logic Type	---		HDLVDS	
Overall Freq. Stability, max	Δf/fo	Includes frequency tolerance @25°C±3°C and frequency stability vs operating temperature range, voltage, load, and 1st year aging	±20	ppm
Output Load	---		100	Ω
Enable / Disable Function	E/D	Pin 1: High, Pins 4 & 5 – Oscillation (Enabled), min	0.7 x Vcc	V
		Pin 1: Low, Pins 4 & 5 – High Impedance (Disabled), max	0.3 x Vcc	V
Symmetry (Duty Cycle)	DC	@50% Wave Form	45 ~ 55	%
Differential Output Swing, min/typ/max	Vopp		800/1200/1600	mV
Rise Time and Fall Time, max	tr / tf	@20% to 80% Wave Form	0.35	ns
Start-up Time, max	t_{start}	90%Vcc to correct freq.	10	ms
Integrated Phase Jitter	J	12kHz < F_J < 20MHz, typ/max	30 / 50	fs-rms

OUTPUT WAVEFORM



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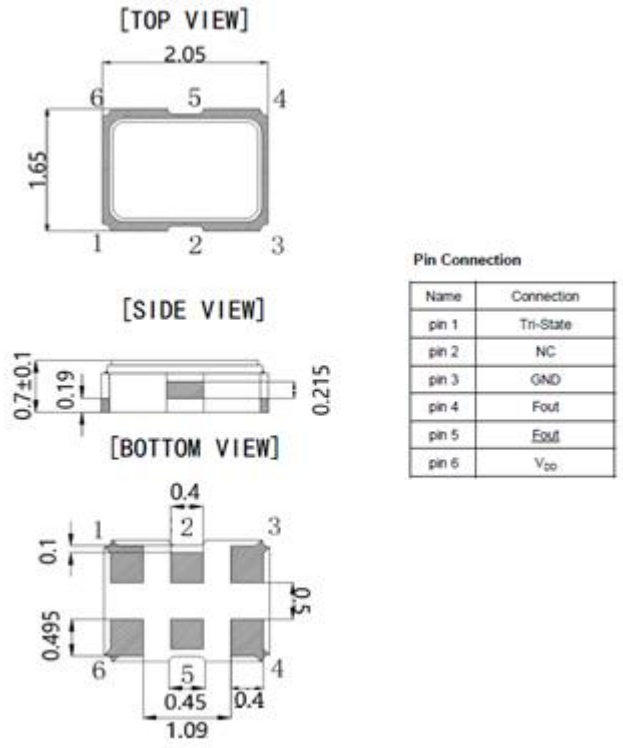
MECHANICAL SPECIFICATION

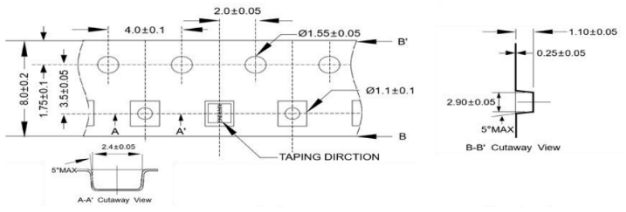


Pin Connection

Name	Connection
pin 1	Tri-State
pin 2	NC
pin 3	GND
pin 4	Fout
pin 5	Fout
pin 6	V_{DD}

Units: mm

CARRIER TAPE DIMENSIONS



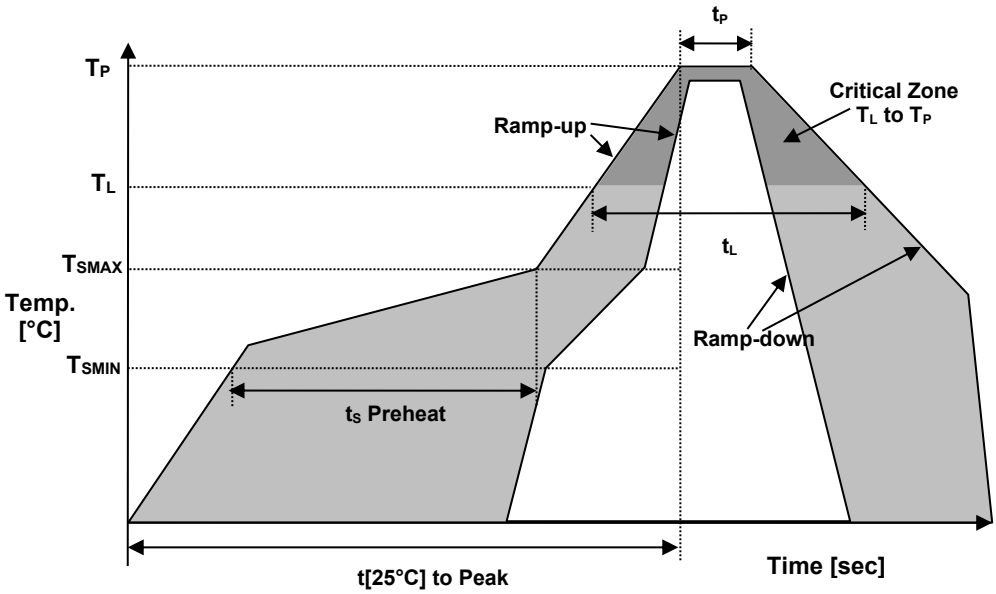
Unit: mm

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

REFLOW PROFILE



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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

R312EL
•3Dxyw

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, 2025
APPROVED BY:	CP, November 19, 2025
REVISION:	A, Initial Release B, Updated Rise and Fall Time and Marking JS, April 30, 2026

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