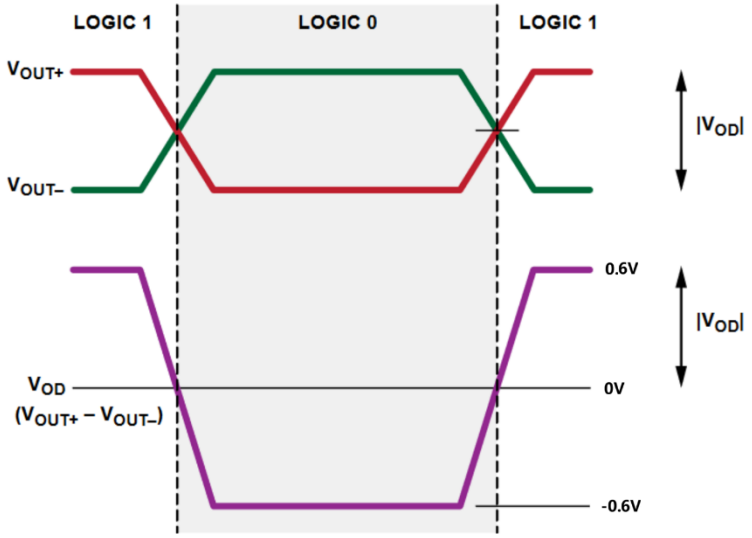
CLFH2016-312.500-1.8-20-6-T-N7



ELECTRICAL SPECIFICATION

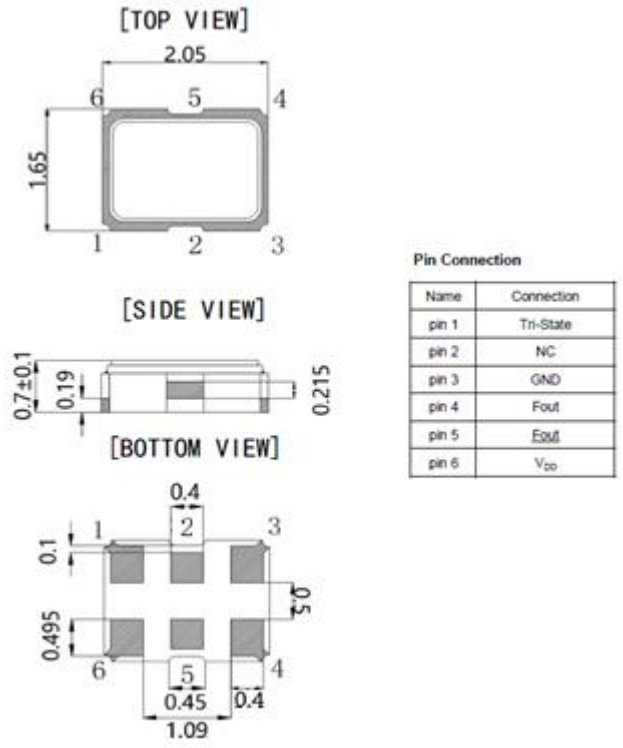
PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo		312.500	MHz
Oscillation Mode			Fundamental	-
Supply Voltage	V_{CC}	Vcc±5%	1.8	VDC
Supply Current, max			31	mA
Operating Temperature Range	Ta	---	-40 ~ +105	°C
Storage Temperature Range	$T_{(stg)}$	Absolute max	-55 ~ +125	°C
Output Logic Type	---		HDLVDS	
Overall Freq. Stability, max	Δf/fo	Includes frequency tolerance @25°C±3°C and frequency stability vs operating temperature range, voltage, load, and 10 years aging	±20	ppm
Output Load	---		100	Ω
Enable / Disable Function	E/D	Pin 1: High, Pins 4 & 5 – Oscillation (Enabled), min	0.8 x Vcc	V
		Pin 1: Low, Pins 4 & 5 – High Impedance (Disabled), max	0.2 x Vcc	V
Symmetry (Duty Cycle)	DC	@50% Wave Form	45 ~ 55	%
Output Voltage min/max			400 / 800	mV
Differential Output Swing, min/max	Vopp		800 / 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	31 / 50	fs-rms
Phase Noise, max	£ (Δf)	@10kHz	-131	dBc/Hz
		@100kHz	-132	
		@1MHz	-151	
		@10MHz	-161	

OUTPUT WAVEFORM



CLFH2016-312.500-1.8-20-6-T-N7

MECHANICAL SPECIFICATION

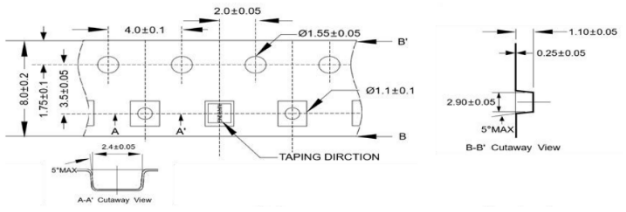


Pin Connection

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



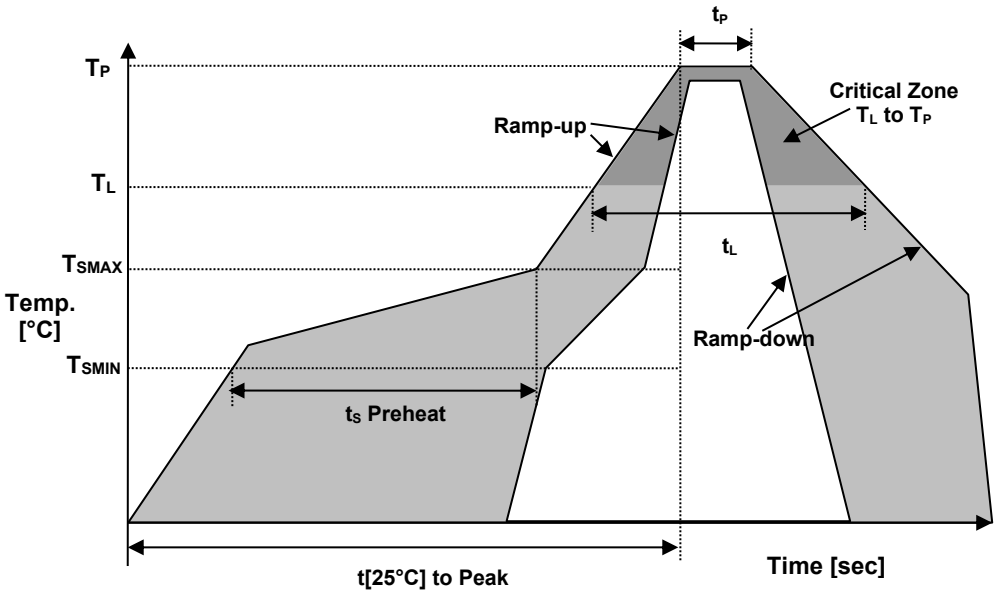
Unit: mm

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



CLFH2016-312.500-1.8-20-6-T-N7

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
•1Dxyw

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			
	Date	Name	Signed
DRAWN BY:	August 14, 2026	XL	Xiangpei Liu
APPROVED BY:	August 14, 2026	JS	
REVISION:	B, Updated stability condition, rise/fall time, jitter and added phase noise		

REVISION HISTORY

Rev	Description	Date	Drawn by	Approved by
A	Initial Release	July 14, 2026	JS	
B	Updated stability condition, rise/fall time, jitter and added phase noise	August 10, 2026	XL	JS

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 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 © 2026, 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.