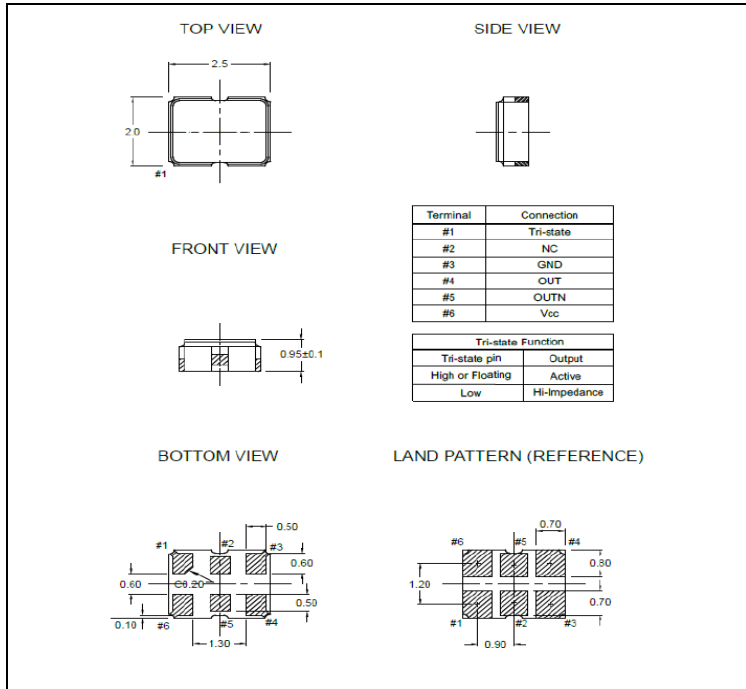


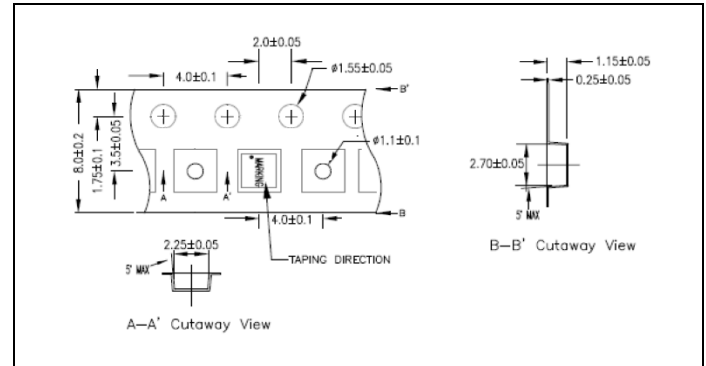
#### ■ ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	$f_o$	Ta=25°C	312.500	MHz
Oscillation Mode			Fundamental	
Supply Voltage	V <sub>CC</sub>	V <sub>CC</sub> ±10%	3.3	VDC
Current Consumption, typ/max	I <sub>CC</sub>		15/30	mA
Operating Temperature Range	T <sub>a</sub>	---	-40 ~ +85	°C
Storage Temperature Range	T <sub>(stg)</sub>	Absolute max	-55 ~ +125	°C
Output Logic Type	---		LVDS	
Freq. Stability, max	$\Delta f/f_o$	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	0.90	VDC
	V <sub>OH</sub>	Logic "1" Level, max	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
Symmetry (Duty Cycle)	DC	@50% Wave Form	45 ~ 55	%
Offset Voltage, min/typ/max	V <sub>OS</sub>		1.125/1.250/1.375	V
Differential Output Swing, min	V <sub>OPP</sub>		0.25	V
Stand By Current, typ/max	I <sub>stand</sub>		100/300	μA
Rise Time and Fall Time, max	t <sub>r</sub> / t <sub>f</sub>	@20% to 80% Wave Form	0.4	ns
Start up Time, max	t <sub>start</sub>		2	ms
Phase Jitter, typ	J	1σ, 12kHz < F <sub>J</sub> < 20MHz	48.7	fs
Phase Noise, typ	£ (Δf)	@10Hz	-42.51	dBc/Hz
		@100Hz	-76.18	
		@1kHz	-108.15	
		@10kHz	-137.45	
		@100kHz	-147.06	
		@1MHz	-153.27	
		@10MHz	-157.68	
		@100MHz	-160.75	

#### MECHANICAL SPECIFICATION



#### CARRIER TAPE DIMENSIONS

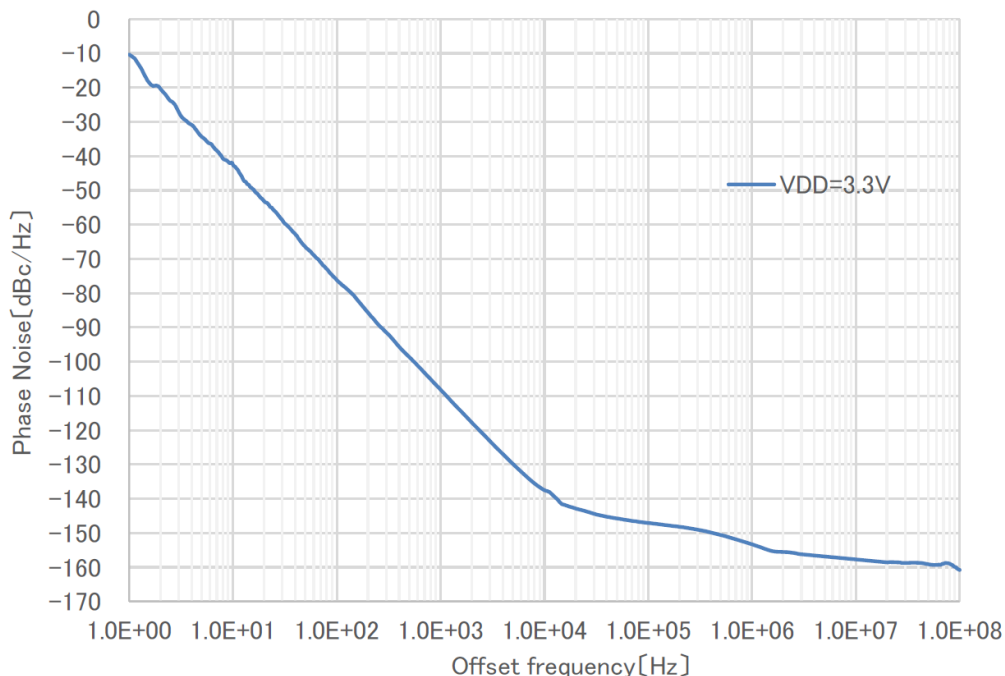


NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED

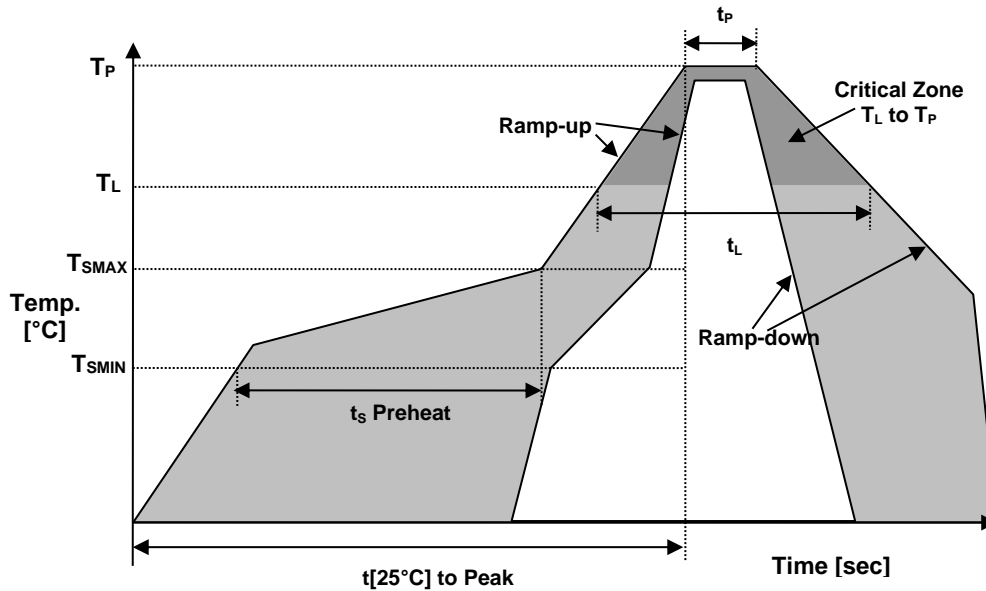
#### PACKAGING

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

#### PHASE NOISE GRAPH TYPICAL



#### 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

Rxx312  
•3BEyw

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

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, February 13, 2025
APPROVED BY:	LS, February 13, 2025
REVISION:	A, Initial Release

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