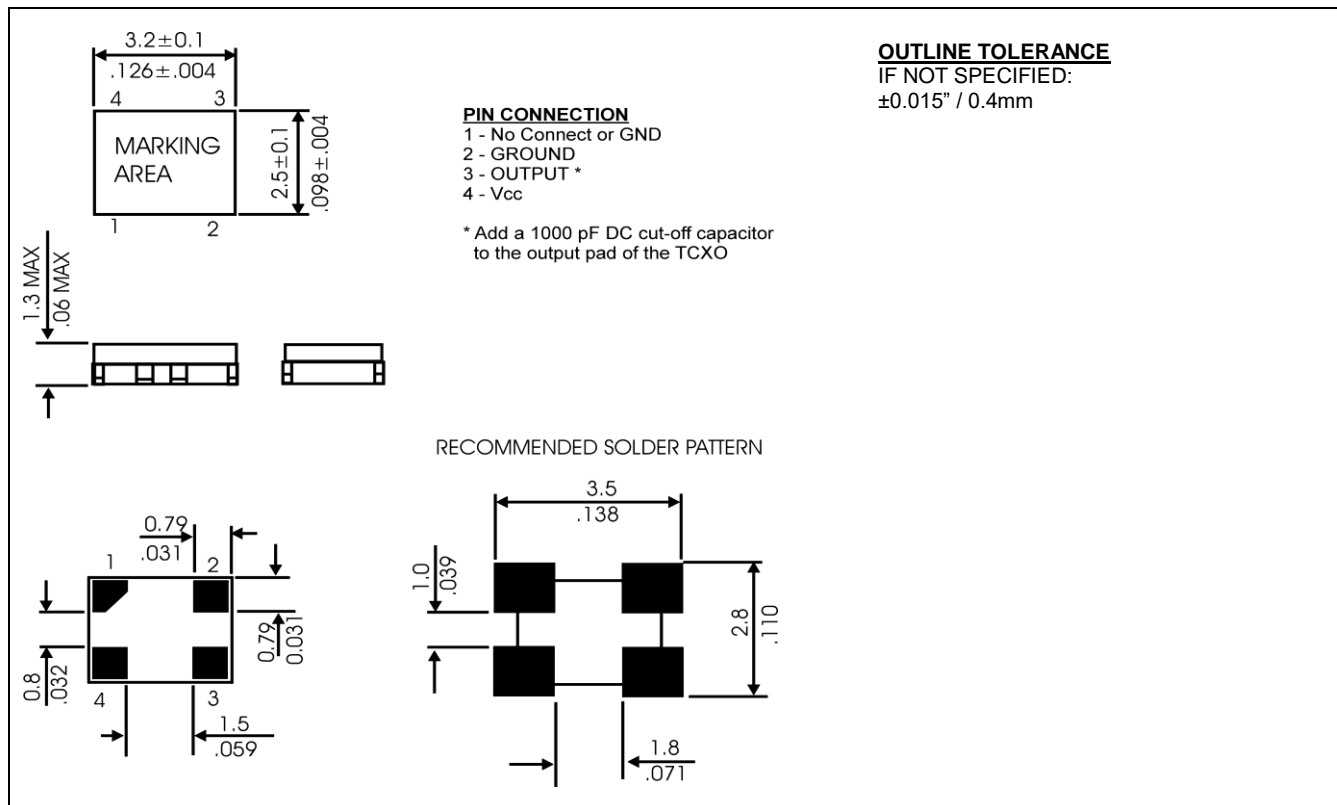


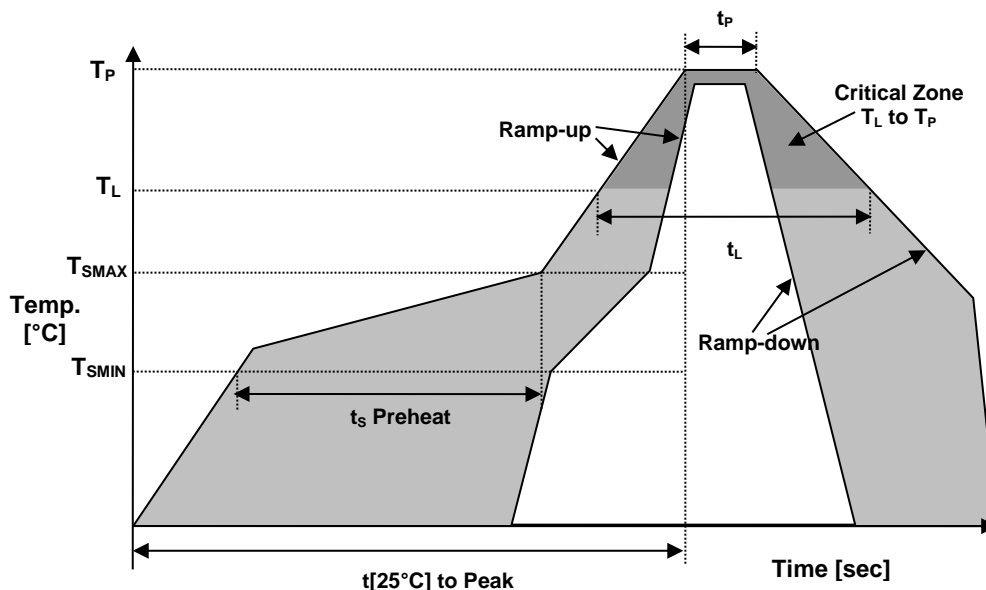
ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT	
Nominal Frequency	f_o	$T_a=25^{\circ}\text{C}$	32.000	MHz	
Supply voltage range	V_{CC}	---	1.8	VDC	
Supply current, max	I_s	$T_a=25^{\circ}\text{C}$	2.0	mA	
Operating temperature	T_a	---	-40 ~ +85	$^{\circ}\text{C}$	
Storage temperature	$T(\text{stg})$	Absolute max	-40 ~ +85	$^{\circ}\text{C}$	
Frequency Stability	vs. Temperature	$\Delta f/f_o(T_a)$	Reference to $+25^{\circ}\text{C}$ over Temperature Range	± 1.5	ppm
	vs. Supply Voltage	$\Delta f/f_v$	$V_{CC} = \pm 5\%$	± 0.2	ppm
	vs. Load	$\Delta f/f_L$	Load $\pm 5\%$, $V_{CC} = \pm 5\%$	± 0.2	ppm
	vs. Aging Max	$\Delta f/f_o(\text{year})$	Per Year at $+25^{\circ}\text{C} \pm 2^{\circ}\text{C}$	± 1.0	ppm
Initial Frequency Calibration, Max	f_c	Measured at 25°C , Reference to f_o	± 2.0	ppm	
Output Level, Clipped Sine Wave, Minimum	-	$10\text{ k}\Omega // 10\text{ pF} \pm 5\%$	0.8	V_{P-P}	
Start up time, Max	t_s	$V_{OUT} \geq 90\% V_{P-P}$	2.0	ms	
Phase noise @ freq. offset, typical.	$\mathcal{L}(\Delta f)$	$\Delta f=100\text{ Hz}$	-110	dBc/Hz	
	$\mathcal{L}(\Delta f)$	$\Delta f=1\text{ kHz}$	-130	dBc/Hz	
	$\mathcal{L}(\Delta f)$	$\Delta f=10\text{ kHz}$	-142	dBc/Hz	
	$\mathcal{L}(\Delta f)$	$\Delta f=100\text{ kHz}$	-147	dBc/Hz	

MECHANICAL SPECIFICATION



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
RoHS2	6/6 COMPLIANT & LEAD FREE
REACH-SVHC	COMPLIANT
HALOGEN-FREE	COMPLIANT
TERMINATION FINISH	Au



• MARKING

Rx32.000

• C31yw

x – Internal Production ID code

y – Year code

w – Week code

YEAR CODE	
Year	Code
2011	1
2012	2
2013	3
2014	4
2015	5
2016	6
2017	7
2018	8
2019	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		

• APPROVAL

RALTRON	
DRAWN BY:	LP, December 07, 2016
APPROVED BY:	Cp, December 07, 2016
REVISION:	A, Initial Release

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