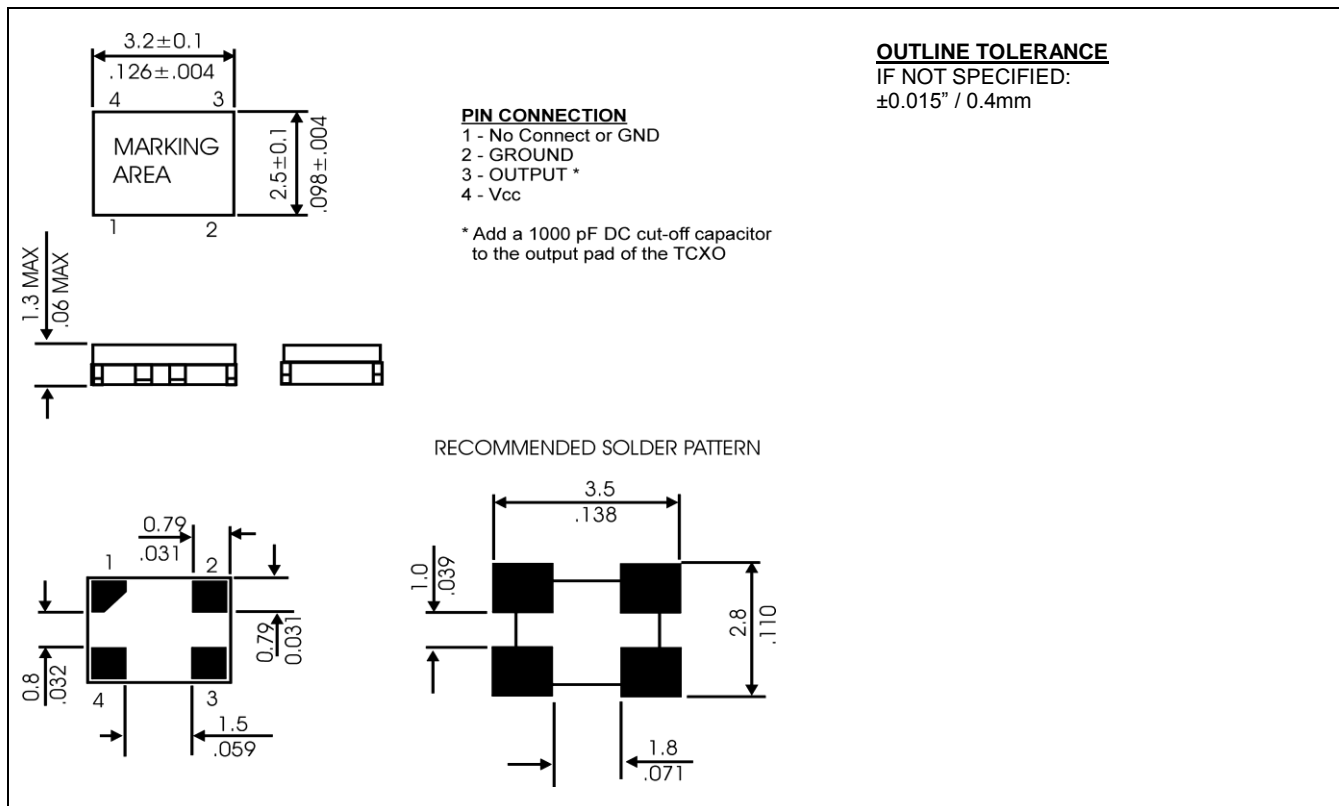


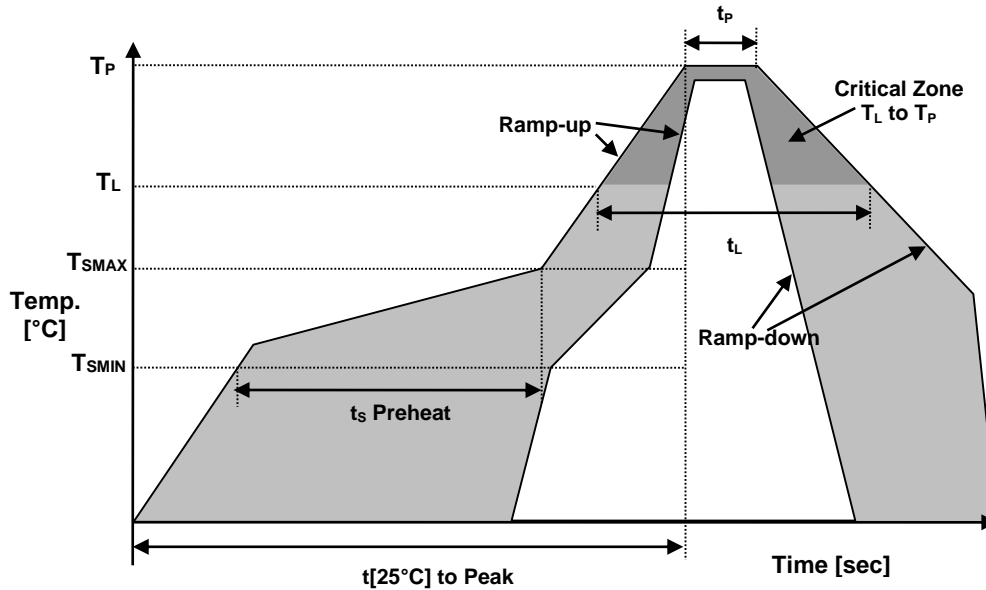
ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	f_0	$T_a=25^\circ\text{C}$	32.000	MHz
Supply voltage range	V_{CC}	---	2.4 to 3.7	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 ~ +90	$^\circ\text{C}$
Frequency Stability				
vs. Temperature	$\Delta f/f_0(T_a)$	Reference to +25 $^\circ\text{C}$ over Temperature Range	± 2.0	ppm
vs. Supply Voltage	$\Delta f/f_V$	$V_{CC} \pm 5\% V$	± 0.2 ↔	ppm
vs. Load	$\Delta f/f_L$	Load $\pm 10\%$, $V_{CC} \pm 5\%$	± 0.1 ↔	ppm
vs. Aging Max	$\Delta f/f_0(\text{year})$	First Year at +25 $^\circ\text{C} \pm 2^\circ\text{C}$	± 1.0 ↔	ppm
Initial Frequency Calibration, Max	f_c	Measured at 25 $^\circ\text{C}$, Reference to f_0	± 1.0	ppm
Output Level, Clipped Sine Wave, Minimum	-	10 // 10 pF $\pm 10\%$	0.8	V_{P-P}
Start up time, Max	t_s	$V_{OUT} \geq 90\% V_{P-P}$	1.5 ↔	ms
Phase noise @ freq. offset, typical.	$\mathcal{E}(\Delta f)$	$\Delta f=1\text{Hz}$	-60	dBc/Hz
	$\mathcal{E}(\Delta f)$	$\Delta f=10\text{Hz}$	-89	dBc/Hz
	$\mathcal{E}(\Delta f)$	$\Delta f=100\text{Hz}$	-113	dBc/Hz
	$\mathcal{E}(\Delta f)$	$\Delta f=1\text{kHz}$	-132	dBc/Hz
	$\mathcal{E}(\Delta f)$	$\Delta f=10\text{kHz}$	-145 ↔	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

Rxx32.00

- DD3Dyw

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:	CP, November 15, 2015
APPROVED BY:	CP, November 15, 2015
REVISION:	A, Initial Release