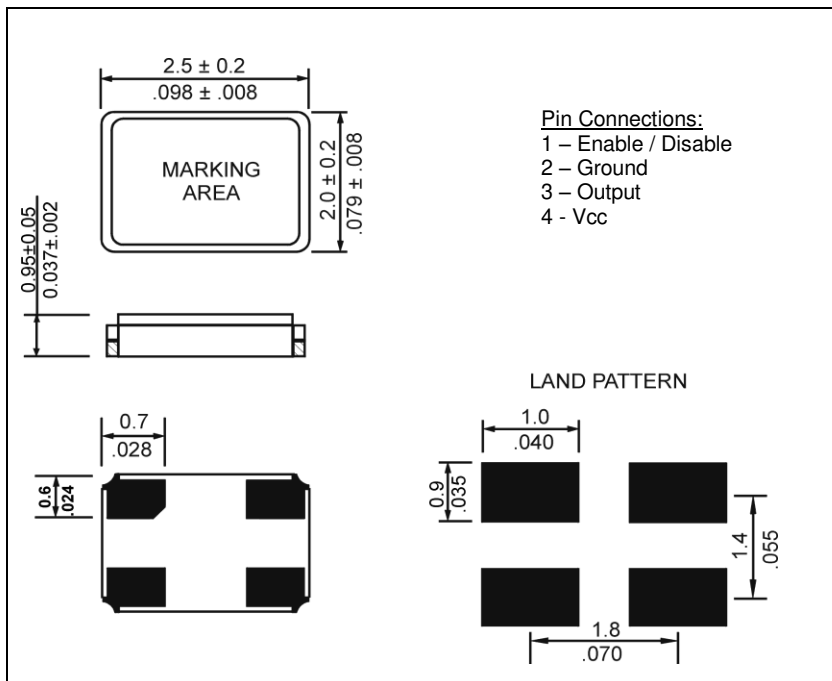


#### ELECTRICAL SPECIFICATION

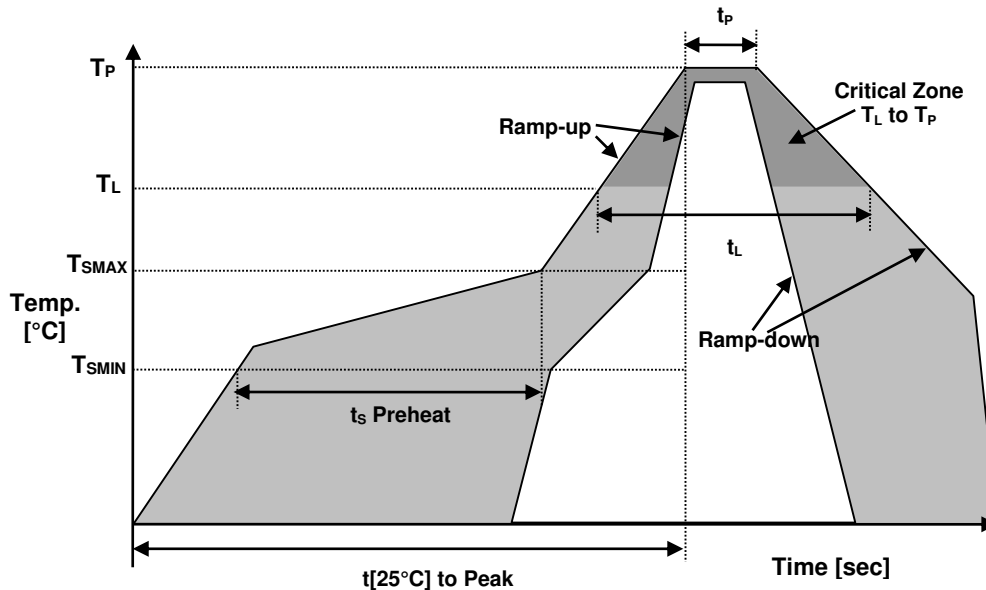
PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	$f_o$	$T_a=25^{\circ}\text{C}$	24.000	MHz
Supply voltage range	$V_{CC}$	---	3.3	VDC
Supply current, max	$I_s$	$T_a=25^{\circ}\text{C}$	4.5	mA
Operating temperature	$T_a$	---	-40 ~ +85	$^{\circ}\text{C}$
Storage temperature	$T_{(stg)}$	Absolute max	-55 ~ +125	$^{\circ}\text{C}$
Frequency Tolerance	$\Delta f/f_o$	Inclusive of $25^{\circ}\text{C}$ Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging, Shock and Vibration	$\pm 50$	ppm
Output Voltage	$V_{OL}$	Logic "0" Level	$0.1 \times V_{CC}$	VDC
	$V_{OH}$	Logic "1" Level	$0.9 \times V_{CC}$	VDC
Output Load	---	CMOS Output	15	pF
Enable / Disable Function	E/D	Pin 1: N.C. (Open) or High	Pin 3 – Oscillation (Enabled)	
		Pin 1: Low	Pin 3 – High Impedance (Disabled)	
Symmetry (Duty Cycle)	DC	@50% Vdd	40 to 60	%
Rise Time and Fall Time, Max	$t_r / t_f$	@10% to 90% Vdd	10	ns
Stand-by Current	$I_{(std)}$	---	10	$\mu\text{A}$
Start up time, Max	$t_s$	$V_{OUT} \geq 90\% V_{P-P}$	10	ms

#### MECHANICAL SPECIFICATION



NOTE: A capacitor of 0.01  $\mu\text{F}$  between Vcc and Ground is recommended

### 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 $t_{[25^\circ\text{C}]}$ to Peak Temperature	$t_{[25^\circ\text{C}]}$ 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

Rx24.0  
•3BEyw

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:	KJackson, May 11, 2015
APPROVED BY:	KJackson, May 11, 2015
REVISION:	A, Initial Release