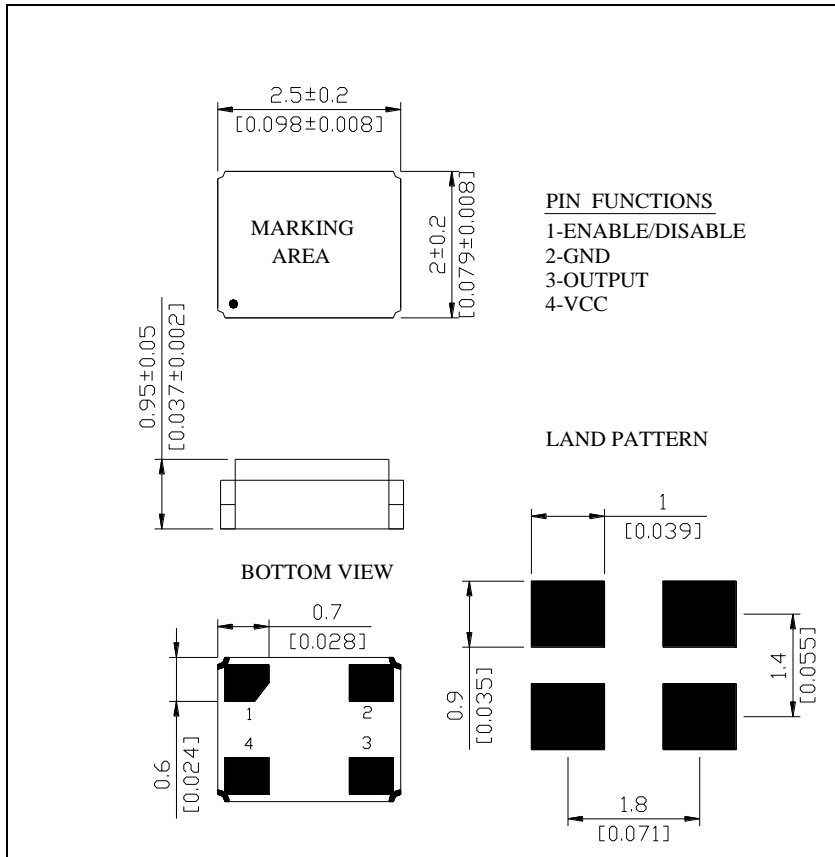


ELECTRICAL SPECIFICATION

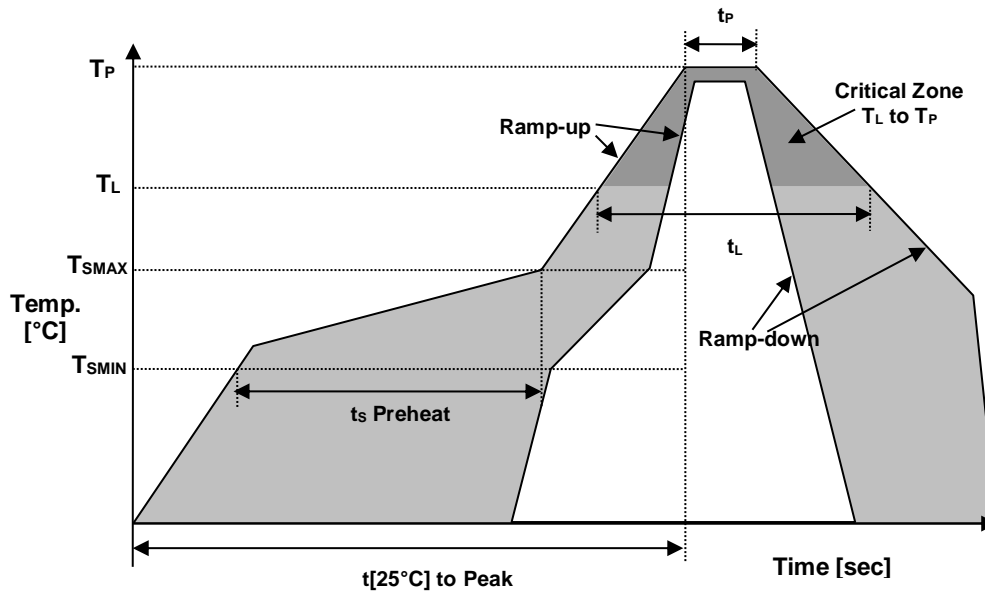
PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	f_o	Ta=25°C	0.032768	MHz
Supply Voltage	V _{CC}	±5%	3.3	VDC
Supply Current, max	I _s	Ta=25°C	200	µA
Operating Temperature Range	T _a	---	-40 ~ +85	°C
Storage Temperature Range	T _(stg)	Absolute max	-55 ~ +125	°C
Frequency Stability	$\Delta f/f_o$	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Shock and Vibration	±50	ppm
Frequency Tolerance		Ref to Center Frequency	±20	ppm
Aging		First Year, @ 25±5°C	±3	ppm
Output Voltage	V _{OL}	Logic "0" Level, max	0.4	VDC
	V _{OH}	Logic "1" Level, min	2.9	VDC
Output Load	---	CMOS Output	15	pF
Enable / Disable Function	E/D	Pin 1: N.C. (Open) or High, Pin 3 – Oscillation (Enabled)	2.64	V
	E/D	Pin 1: Low, Pin 3 – High Impedance (Disabled)	0.66	V
Symmetry (Duty Cycle)	DC	@50% V _{dd}	40 ~ 55	%
Rise Time and Fall Time, max	tr / tf	@10% to 90% V _{dd}	30	ns

MECHANICAL SPECIFICATION



NOTE: A capacitor of 0.01 μ 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 $t_{[25^\circ\text{C}] \text{ to Peak Temperature}}$	$t_{[25^\circ\text{C}] \text{ to Peak}}$	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

Rx0.03
•33Byw

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, February 16, 2018
APPROVED BY:	JL, February 16, 2018
REVISION:	A, Initial Release

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