

ELECTRICAL SPECIFICATION

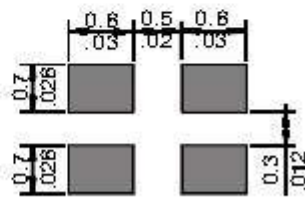
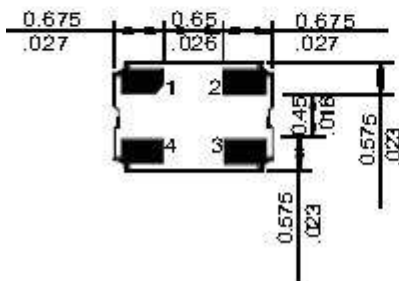
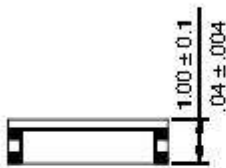
PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	f_o	$T_a=25^{\circ}\text{C}$	24.000	MHz
Supply voltage range	V_{CC}	---	3.3	VDC
Supply current, max	I_s	$T_a=25^{\circ}\text{C}$	240	mA
Operating temperature	T_a	---	-20 ~ +70	$^{\circ}\text{C}$ \leftrightarrow
Storage temperature	$T_{(stg)}$	Absolute 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	± 25	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
Start up time, Max	t_s	$V_{OUT} \geq 90\% V_{P-P}$	10	ms

MECHANICAL SPECIFICATION



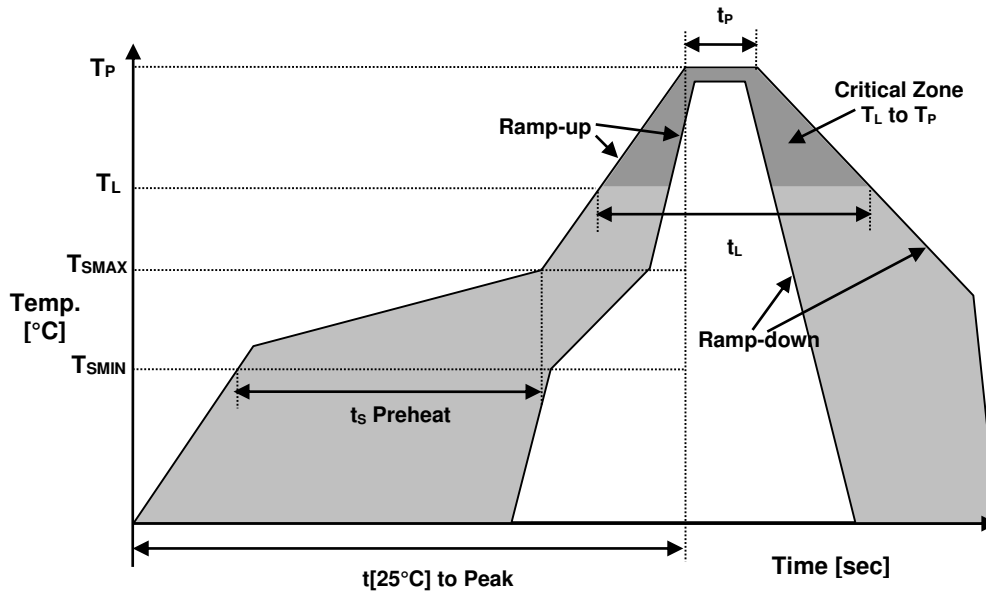
PIN CONNECTION

- 1- E/D
- 2- GND
- 3- OUTPUT
- 4- Vcc



SOLDER PATTERN

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

Rx24.00
 •33Ayyww

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, October 6, 2015
APPROVED BY:	KJackson, October 6, 2015
REVISION:	A, Initial Release