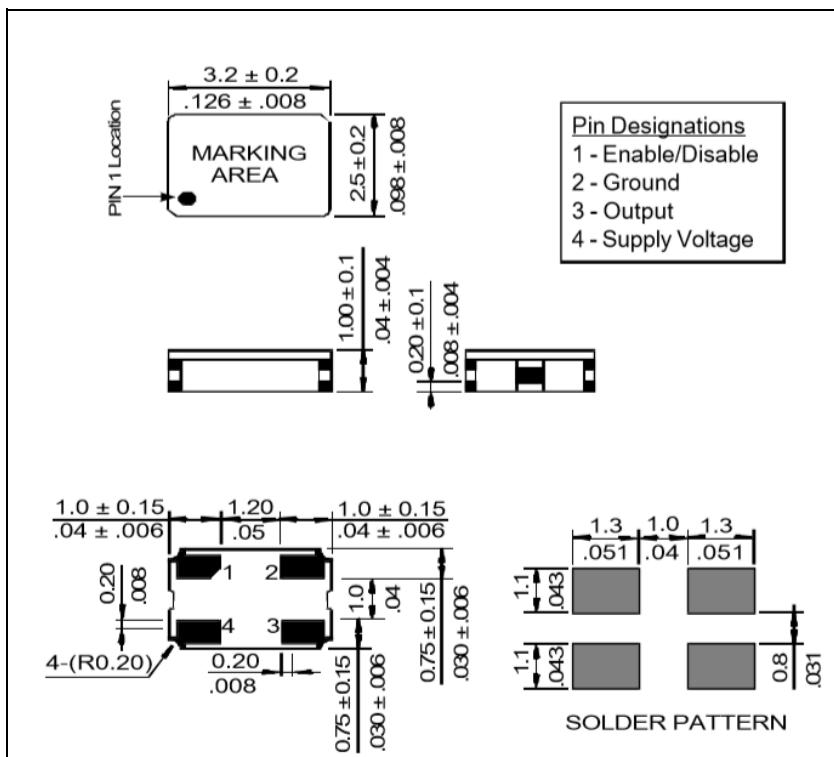


#### ELECTRICAL SPECIFICATION

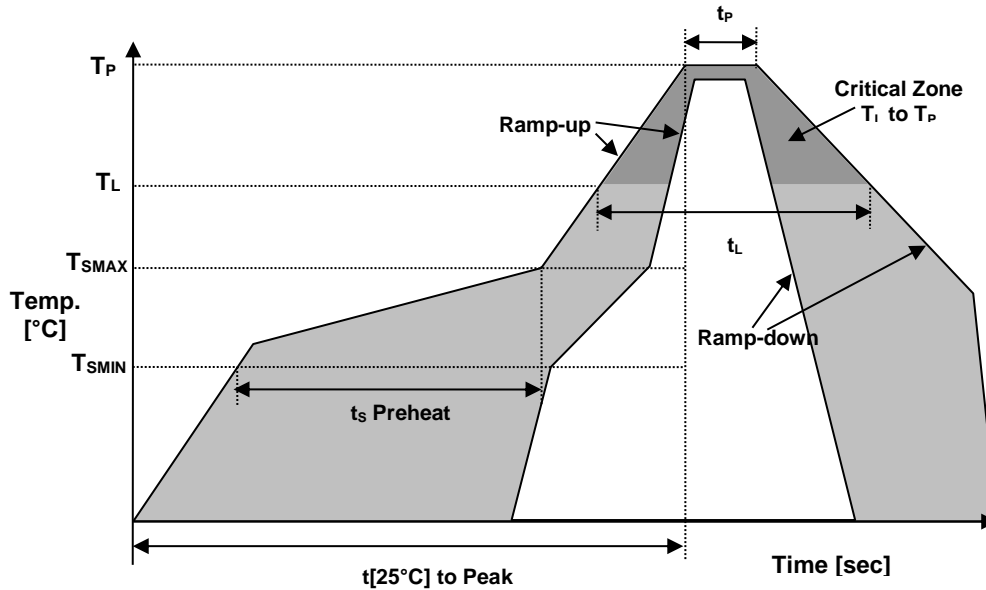
PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	$f_o$	Ta=25°C	13.500	MHz
Supply Voltage	V <sub>CC</sub>	V <sub>CC</sub> ±10%	3.3	VDC
Supply Current, max	I <sub>S</sub>	Ta=25°C	4.1	mA
Operating Temperature	Ta		-40 ~ +85	°C
Storage Temperature	T <sub>(stg)</sub>	Absolute max	-55 ~ +125	°C
Frequency Stability	$\Delta f/f_o$	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging	±50	ppm
Output Voltage	V <sub>OL</sub>	Logic "0" Level	0.1 x V <sub>CC</sub>	VDC
	V <sub>OH</sub>	Logic "1" Level	0.9 x V <sub>CC</sub>	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% V <sub>DD</sub>	45 ~ 55	%
Rise Time and Fall Time	t <sub>r</sub> / t <sub>f</sub>	@10% to 90% V <sub>DD</sub>	2	ns
Start-up Time, max	t <sub>s</sub>	V <sub>OUT</sub> ≥ 90% V <sub>P-P</sub>	10	ms
Standby Current	I <sub>(std)</sub>		4.3	µA
RMS Phase Jitter		F <sub>j</sub> = 10kHz to 20MHz	1	ps

#### MECHANICAL SPECIFICATION



NOTE: A capacitor of 0.01 µF between V<sub>CC</sub> 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
RoHS	Compliant
REACH-SVHC	Compliant
HALOGEN-FREE	Compliant
TERMINATION FINISH	Au





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# CLOCK OSCILLATOR

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## COM1305-13.500-EXT-T-TR

### MARKING

Rx13.50T  
•3BEyw

x – Internal Production ID code  
y – Year code  
w – Week code

YEAR CODE	
Year	Code
2015	5
2016	6
2017	7
2018	8
2019	9
2020	0
2021	1
2022	2
2023	3
2024	4
2025	5

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:	Initial Release, June 03, 2011
APPROVED BY:	Initial Release, June 03, 2011
REVISION:	A, Initial Release B, Updated to current spec levels by YLi, May 12, 2020

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