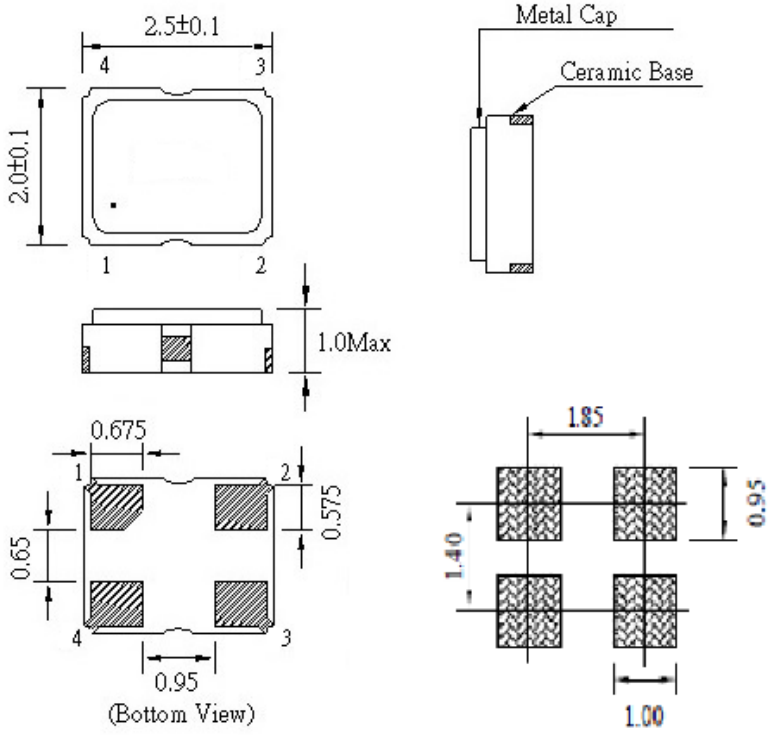
ELECTRICAL SPECIFICATION

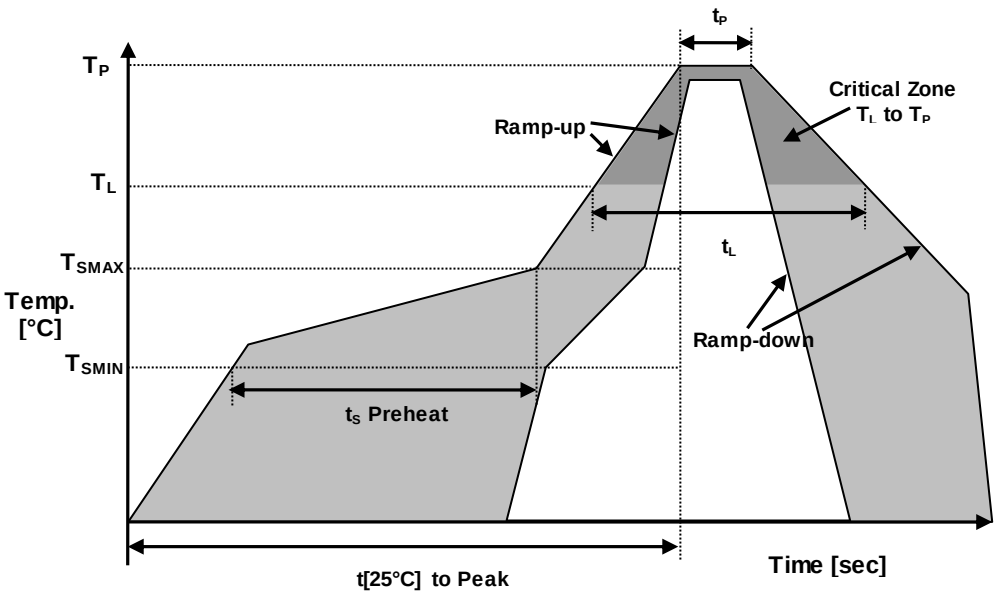
PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo	Vcc ±5%	32.000	MHz
Supply voltage, nom.	V_{CC}	Vcc ±5%	3.3	VDC
Supply current, max	I_S	Vcc ±5%	2.5	mA
Operating temperature	Ta		-30 ~ +85	°C
Storage temperature	T(stg)	Absolute max	-40 ~ +85	°C
Frequency Stability				
vs. Temperature	Δf/fo(Ta)	Reference to +25°±2°C (-30 to 85°C)	±0.5	ppm
vs. Supply Voltage	$\Delta f/f_V$	Vcc ±5%	±0.2	ppm
vs. Load	$\Delta f/f_L$	Load ±10%	±0.2	ppm
vs. Aging Max	Δf/fo(year)	Per Year at +25°C ± 2°C	±1.0	ppm
Initial Frequency Calibration, max	f_C	Measured at 25°C, before shipment	±1.0	ppm
Reflow Shift, max		2 consecutive reflows, after 2 hours relaxation	±1.0	ppm
Start Up Time			2	ms
Output Level, Clipped Sine Wave, min		10kΩ // 10 pF ±10%	0.8	V_{P-P}
Phase Noise @ Freq. offset, typ	£ (Δf)	@10Hz	-87	dBc/Hz
		@100Hz	-112	dBc/Hz
		@1kHz	-132	dBc/Hz
		@10kHz	-147	dBc/Hz
		@100kHz	-151	dBc/Hz

MECHANICAL SPECIFICATION



PIN FUNCTIONS:
[1] GND
[2] GND
[3] OUTPUT
[4] VCC

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
REACH	Compliant
RoHS	Compliant
TERMINATION FINISH	Au

RoHS Compliant

• MARKING

Rx320
•AF3yw

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

YEAR CODE	
Year	Code
2018	8
2019	9
2020	0
2021	1
2022	2
2023	3
2024	4
2025	5
2026	6
2027	7
2028	8
2029	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		

■ APPROVALS

RALTRON	
Created by, date:	KJackson, August 10, 2017
Eng. approval, date:	JIvens, August 10, 2017
Revision: A B	Initial Release CP, November 17, 2021 Updated to the current spec level