

ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT	
Nominal Frequency	f_0	$V_{CC} \pm 5\%$	32.000	MHz	
Supply Voltage, nom.	V_{CC}	$V_{CC} \pm 10\%$	2.8	VDC	
Supply Current, max	I_S	$V_{CC} \pm 5\%$	2.0	mA	
Operating Temperature Range	T_a		-40 ~ +85	°C	
Storage Temperature Range	$T(stg)$	Absolute max	-40 ~ +85	°C	
Frequency Stability, max	vs. Temperature	$\Delta f/f_T$	Reference to +25° (-40 ~ +85°C)	±1.0	ppm
	vs. Supply Voltage	$\Delta f/f_V$	@2.8VDC±10%	±0.2	ppm
	vs. Load	$\Delta f/f_L$	@10kΩ±10%, 10pF±10%	±0.2	ppm
	vs. Aging	$f/f_0(\text{year})$	@ +25°±2°C	±1.0	ppm
	Vs. Reflow		1h after reflow	±1.0	ppm
Initial Frequency Calibration, max		Measured at 25°C±2°C	±1.5	ppm	
Start Up Time, max			2	ms	
Output Level, Clipped Sine Wave		10kΩ // 10 pF ±10%	0.8	V _{P-P}	
Phase Noise	$\mathcal{L}(\Delta f)$	@1 kHz offset	-135	dBc/Hz	
Harmonics, max			-5.0	dBc	

MECHANICAL SPECIFICATION

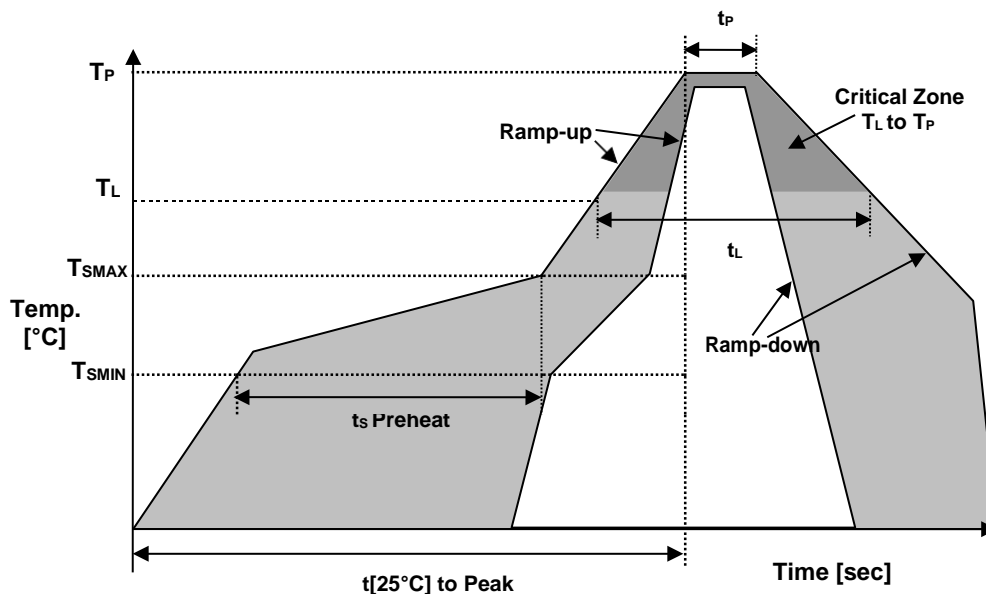
OUTLINE TOLERANCE
IF NOT SPECIFIED:
±0.015" / 0.4mm

PIN FUNCTIONS:
[1] GND
[2] GND
[3] OUTPUT *
[4] V_{CC}

* Add a 1000 pF DC-cut capacitor to the output pad of the TCXO.

Dimensions shown in drawings:
 - Top view: 1.65±0.1 (width), 1.25±0.1 (height), pins #1, #2, #3, #4.
 - Side view: 0.45±0.1 (thickness).
 - Pin detail: pins #1 and #2 are 0.375 wide, #3 and #4 are 0.425 wide. Pin #3 height is 0.4. Pin #4 height is 0.425.
 - Pin #3 detail: width 0.9, height 0.95, distance from #4 is 1.4.

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
REACH	Compliant
RoHS	Compliant
TERMINATION FINISH	Au





A RAMI TECHNOLOGY Company

TCXO

RTX-1612BD32-S-32.000-TR

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MARKING

Rx32.00

•B32yw

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

YEAR CODE table with columns Year and Code, mapping years 2011-2019 to codes 1-9.

ALPHA WEEK CODE TABLE with columns Week and Code, mapping weeks 1-36 to letters a-z and A-J.

APPROVALS

Approval table with header RALTRON and rows for Created by, date; Eng. approval, date; and Revision: A, Initial Release.

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