

ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	f_0	$V_{CC} \pm 5\%$	52.000	MHz
Supply Voltage, nom.	V_{CC}	$V_{CC} \pm 10\%$	2.8	VDC
Supply Current, max	I_s	$V_{CC} \pm 5\%$	3.0	mA
Operating Temperature Range	T_a		-40 ~ +85	°C
Storage Temperature Range	$T(stg)$	Absolute max	-40 ~ +85	°C
Frequency Stability vs. Temperature	$\Delta f/f_0(T_a)$	Reference to +25°±2°C (-30 ~ +85°C)	±1.0	Ppm
		Reference to +25°±2°C (-40 ~ -30°C)	±2.0	ppm
Frequency Stability vs. Supply Voltage vs. Load vs. Aging max	$\Delta f/f_0(\text{year})$	$V_{CC} \pm 5\%$	±0.2	ppm
		Load ±10%	±0.2	ppm
		Per Year at +25°C ± 2°C	±1.0	ppm
Initial Frequency Calibration, Max		Measured at 25°C, after 2 reflows	±2.0	ppm
Start Up Time			5	ms
Output Level, Clipped Sine Wave		10kΩ // 10 pF ±10%	0.8	V _{P-P}
Phase Noise	$\mathcal{L}(\Delta f)$	@100 kHz	-147	dBc/Hz

MECHANICAL SPECIFICATION

Top View Dimensions: 2.05±0.1, 1.65±0.1, #5, #3, #1, #2, #6

Bottom View Dimensions: 1.45, 1.15, 0.425, 0.5, 0.605, 0.4, #1, #2, #3, #6

Side View Dimension: 0.7±0.1

(Bottom View)

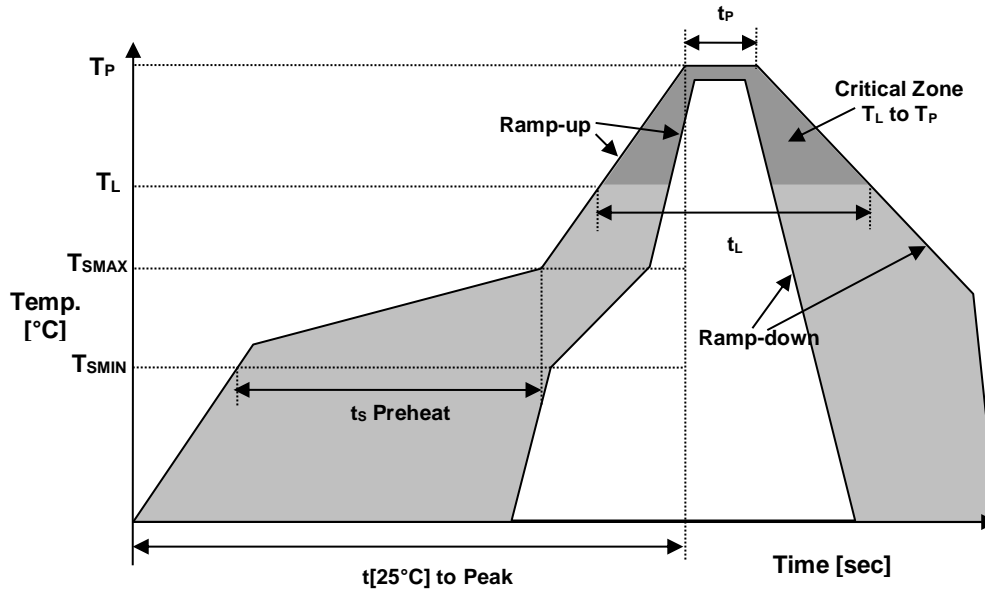
OUTLINE TOLERANCE
IF NOT SPECIFIED:
±0.015" / 0.4mm

PIN FUNCTIONS:
[1] GND
[2] GND
[3] OUTPUT *
[4] V_{CC}
[5] [6] NO CONNECT ↔

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

Recommended Soldering 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
REACH	Compliant
RoHS	Compliant
TERMINATION FINISH	Au





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TCXO

RTX-2016BD32-S-52.000-TR-NS1

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MARKING

Rx52.00

•B32yw

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		

APPROVALS

RALTRON
Created by, date: CP, November 15, 2017
Eng. approval, date: JI, November 15, 2017
Revision: A

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