

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 | $V_{CC} \pm 5\%$ | 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 | $f/f_0(T_a)$ | Reference to +25°C ±2°C (-30 ~ +85°C) | ±1.0 | Ppm |
| | | Reference to +25°C ±2°C (-40 ~ -30°C) | ±2.0 | ppm |
| Frequency Stability vs. Supply Voltage vs. Load vs. Aging max | f/f_V | $V_{CC} \pm 5\%$ | ±0.2 | ppm |
| | f/f_L | Load ±10% | ±0.2 | ppm |
| | $f/f_0(\text{year})$ | 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 | $\mathcal{L}(f)$ | @100 kHz | -147 | dBc/Hz |

MECHANICAL SPECIFICATION

(Bottom View)

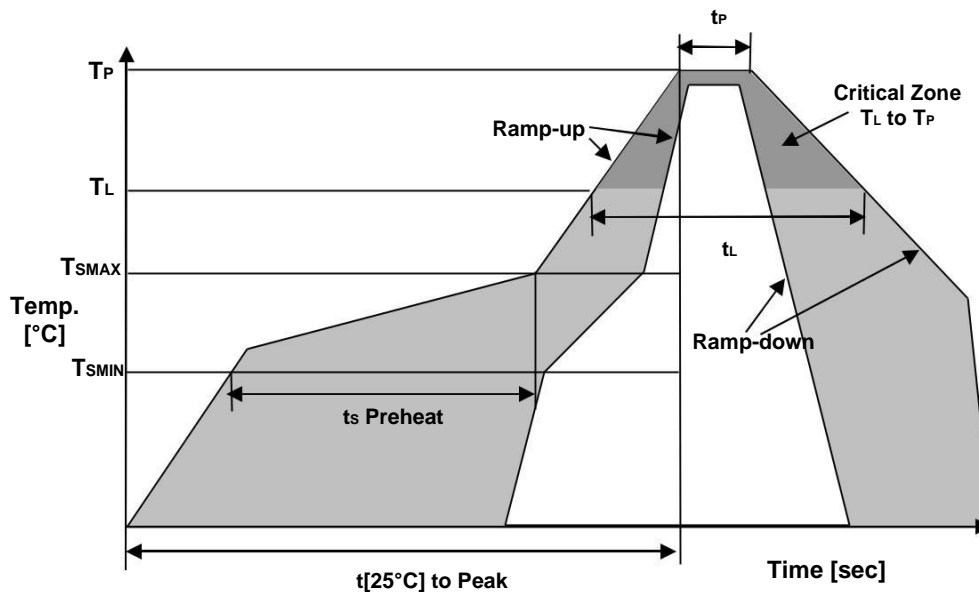
OUTLINE TOLERANCE
IF NOT SPECIFIED:
±0.015" / 0.4mm

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 $t[25^\circ C]$ to Peak Temperature | $t[25^\circ C]$ to Peak | 480 sec. |
| Time | t_L | 60-150 sec. |

ENVIRONMENTAL

| PARAMETER | VALUE |
|----------------------------|-----------|
| MOISTURE SENSITIVITY LEVEL | 1 |
| REACH | Compliant |
| RoHS | Compliant |
| TERMINATION FINISH | Au |



• MARKING

Rx32.00

•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: JH, December 6, 2018 |
| Eng. approval, date: CP, December 6, 2018 |
| Revision: A |

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