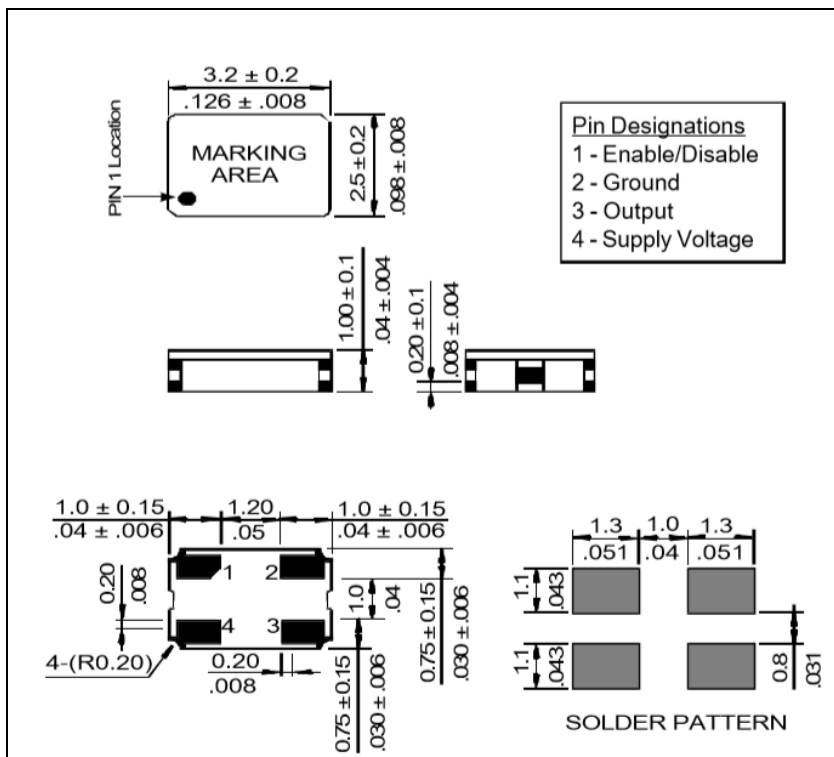


ELECTRICAL SPECIFICATION

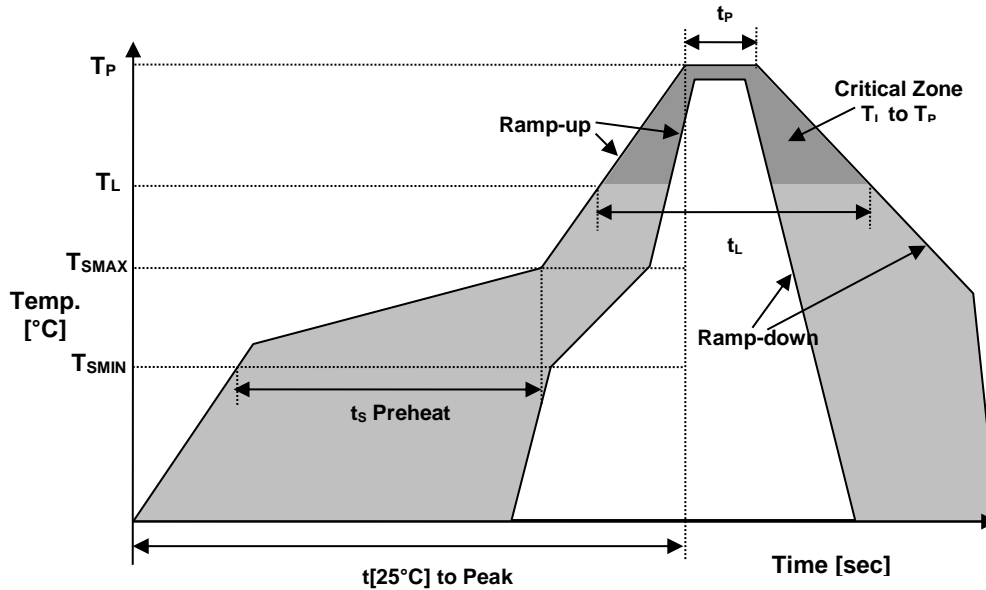
| PARAMETER | SYMBOL | CONDITIONS | VALUE | UNIT |
|---------------------------|---------------------------------|---|-----------------------------------|------|
| Nominal Frequency | f_o | Ta=25°C | 38.400 | MHz |
| Supply Voltage | V _{CC} | V _{CC} ±10% | 3.3 | VDC |
| Supply Current, max | I _S | Ta=25°C | 10 | mA |
| Operating Temperature | Ta | | -10 ~ +70 | °C |
| Storage Temperature | T _(stg) | 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 | ±25 | ppm |
| Output Voltage | V _{OL} | Logic "0" Level | 0.1 x V _{CC} | VDC |
| | V _{OH} | Logic "1" Level | 0.9 x V _{CC} | 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 _{DD} | 45 ~ 55 | % |
| Rise Time and Fall Time | t _r / t _f | @10% to 90% V _{DD} | 5 | ns |
| Start-up Time, max | t _s | V _{OUT} ≥ 90% V _{P-P} | 10 | ms |
| Standby Current | I _(std) | | 10 | μA |
| RMS Phase Jitter | J | F _J = 10kHz to 20MHz | 1 | ps |

MECHANICAL SPECIFICATION



NOTE: A capacitor of 0.01 μF between V_{CC} 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 |





A RAMI TECHNOLOGY Company

CLOCK OSCILLATOR

Page 3 of 3

COM13025-38.400-T-TR

MARKING

Rx38.40T

•3Ayww

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, April 14, 2011 |
| APPROVED BY: | FP, April 14, 2011 |
| REVISION: | A, Initial Release B, Updated to current spec levels by YLi, May 12, 2020 |

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