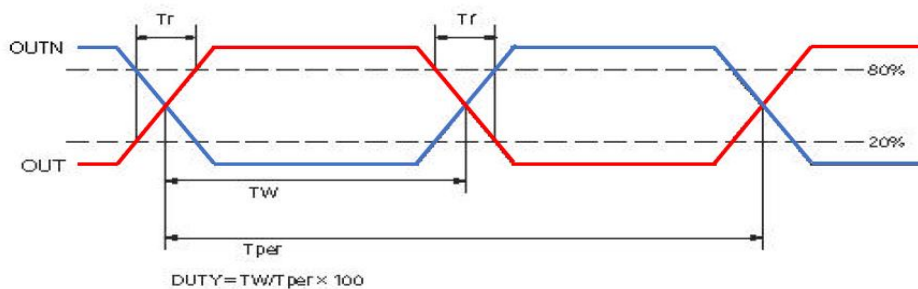


ELECTRICAL SPECIFICATION

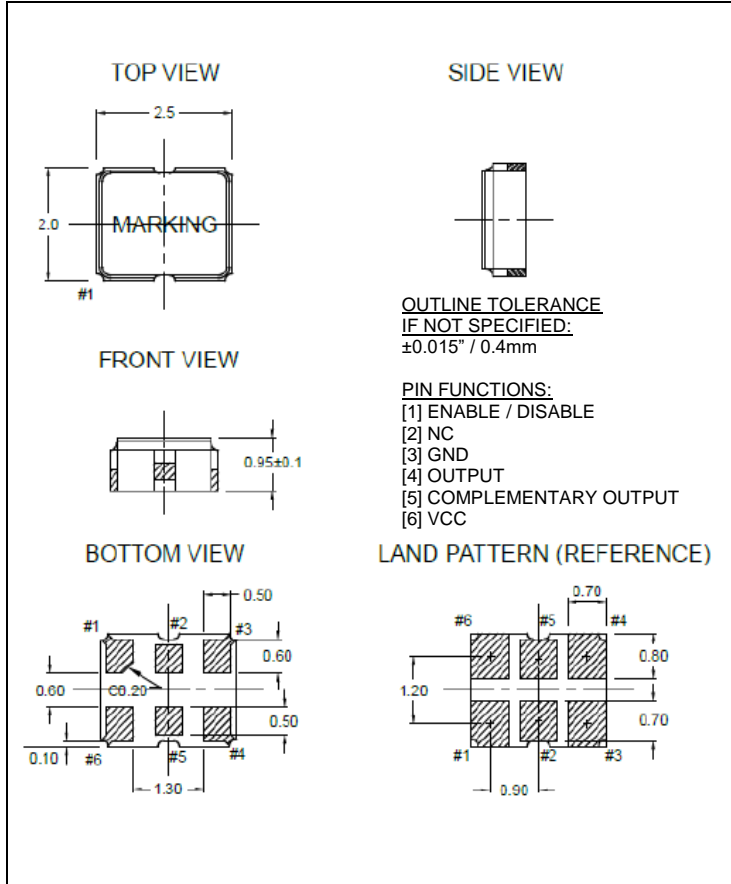
| PARAMETER | SYMBOL | CONDITIONS | VALUE | UNIT |
|------------------------------|---------------------------------|--|-----------------------|--------|
| Nominal Frequency | f_o | Ta=25°C | 156.250 | MHz |
| Oscillation Mode | | | Fundamental | - |
| Supply Voltage | V _{CC} | V _{CC} ±5% | 2.5 | VDC |
| Supply Current, max | | | 20 | mA |
| Operating Temperature Range | Ta | --- | -40 ~ +85 | °C |
| Storage Temperature Range | T _(stg) | Absolute max | -55 ~ +125 | °C |
| Output Logic Type | --- | | LVDS | |
| Freq. Stability, max | $\Delta f/f_o$ | Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load and Aging | ±50 | ppm |
| Output Voltage | V _{OL} | Logic "0" Level, min | 0.9 | VDC |
| | V _{OH} | Logic "1" Level, max | 1.6 | VDC |
| Output Load | --- | Out-OutN | 100 | Ω |
| Enable / Disable Function | E/D | Pin 1: High, Pins 4 & 5 – Oscillation (Enabled), min | 0.7 x V _{CC} | V |
| | | Pin 1: Low, Pins 4 & 5 – High Impedance (Disabled), max | 0.3 x V _{CC} | V |
| Symmetry (Duty Cycle) | DC | @50% Wave Form | 45 ~ 55 | % |
| Stand by Current, max | | | 10 | μA |
| Offset Voltage, min/typ/max | V _{OS} | | 1.125/1.25/1.375 | V |
| Output Swing, min | V _{OPP} | | 0.4 | V |
| Rise Time and Fall Time, max | t _r / t _f | @20% to 80% Wave Form | 0.4 | ns |
| Start up Time, max | t _{start} | | 2 | ms |
| Jitter, RMS, typ/max | J | 1σ, 12kHz < F _J < 20MHz | 33.6/50 | fs |
| Phase Noise, typ | £ (Δf) | @10Hz | -75.40 | dBc/Hz |
| | | @100Hz | -105.60 | |
| | | @1kHz | -134.60 | |
| | | @10kHz | -150.75 | |
| | | @100kHz | -157.38 | |
| | | @1MHz | -161.58 | |
| | | @40MHz | -164.00 | |

OUTPUT WAVEFORM

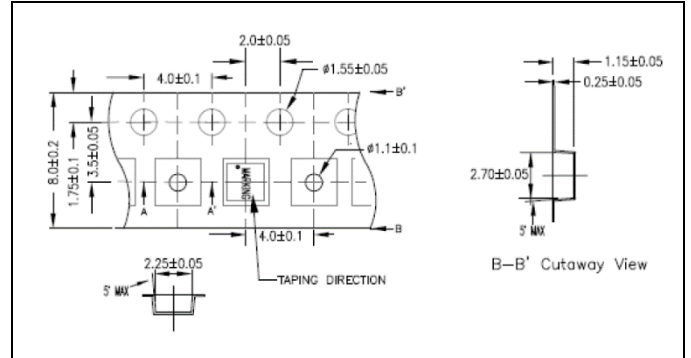


CLF2520-156.250-2.5-50-X-T-N1

MECHANICAL SPECIFICATION



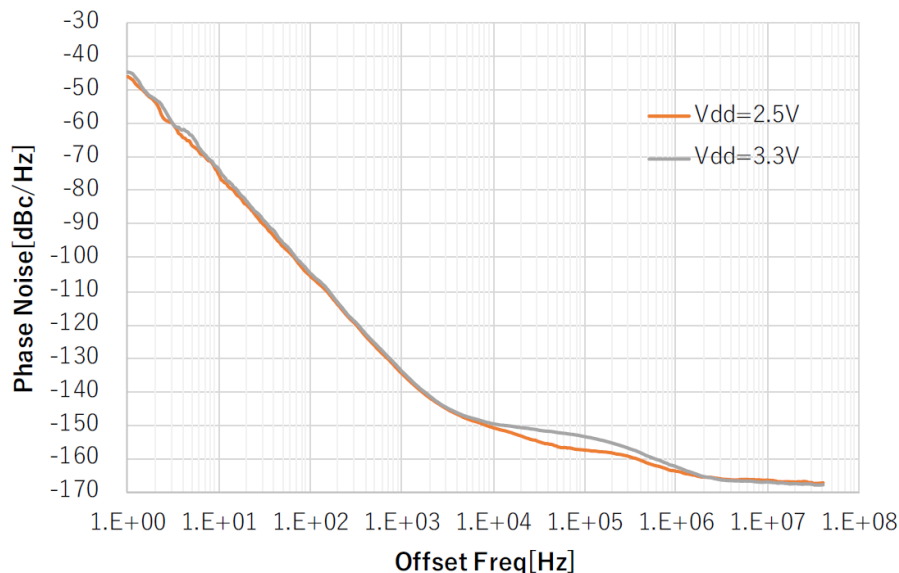
CARRIER TAPE DIMENSIONS



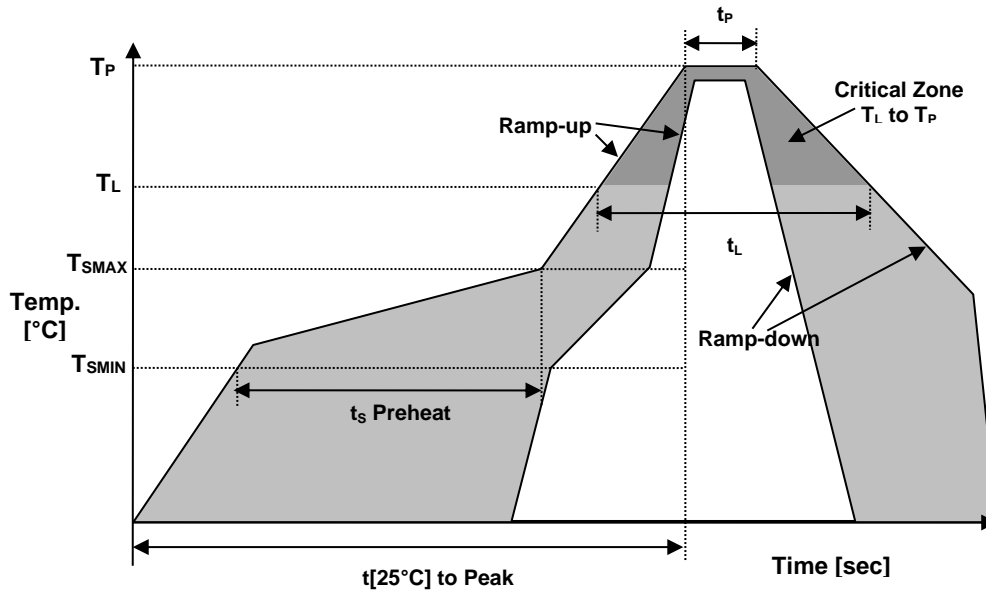
PACKAGING

180 mm REEL DIAMETER
8 mm TAPE WIDTH, 4 mm PITCH
QUANTITY: 3000 PIECES PER REEL

PHASE NOISE GRAPH



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 |



MARKING

Rxx156
•2BEyw

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

| YEAR CODE | |
|-----------|------|
| Year | Code |
| 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 | | |
| 18 | r | 36 | J | | |

APPROVAL

| RALTRON | |
|--------------|-----------------------|
| DRAWN BY: | JS, February 14, 2025 |
| APPROVED BY: | CP, February 14, 2025 |
| REVISION: | A, Initial Release |

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