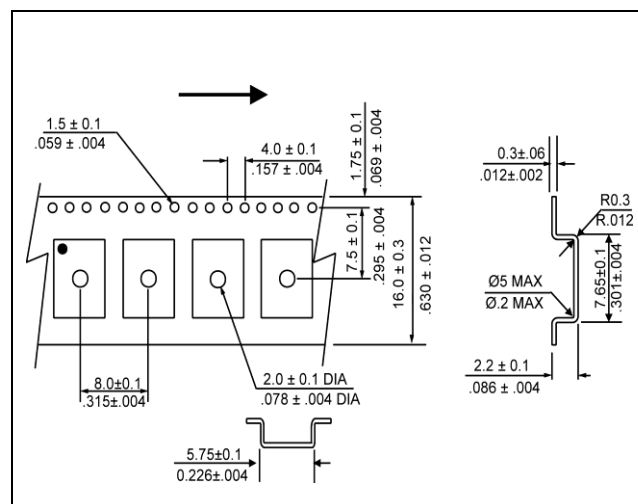
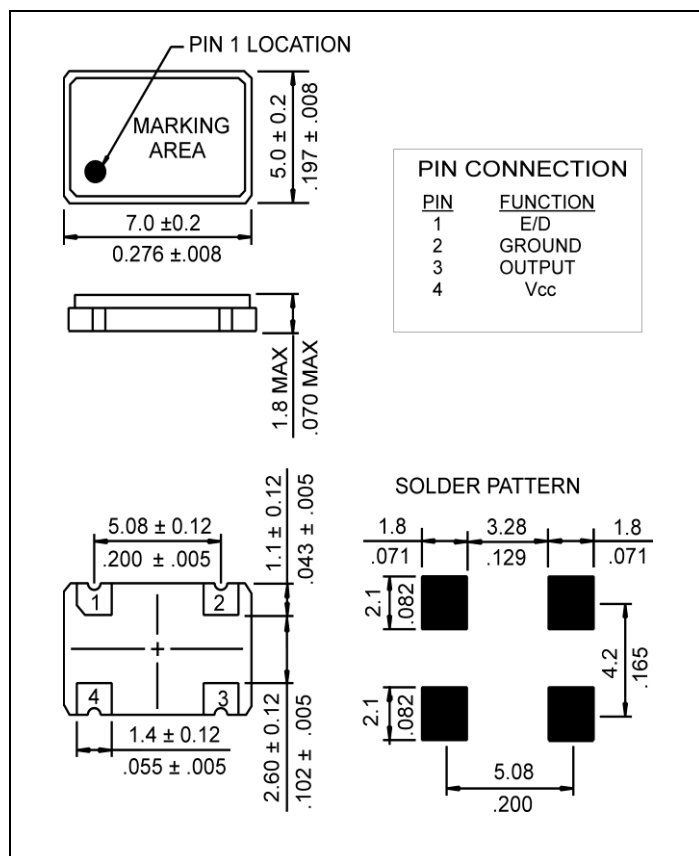


#### ELECTRICAL SPECIFICATION

| PARAMETER                     | SYMBOL               | CONDITIONS                                                                                                             | VALUE              | UNIT             |
|-------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------|--------------------|------------------|
| Frequency, nom                | $f_o$                | -                                                                                                                      | 32.768             | MHz              |
| Supply voltage, nom.          | $V_{CC}$             | $V_{CC} \pm 10\%$                                                                                                      | 3.3                | V                |
| Supply current, max.          | $I_s$                | $V_{CC}=3.3$ VDC; $T_a=+25^\circ\text{C}$ ;<br>Load=20 pF CMOS or 5 TTL MAX                                            | 25                 | mA               |
| Output Voltage Levels         | $V_{OH}$<br>$V_{OL}$ | Logic 1<br>Logic 0                                                                                                     | 2.8 min<br>0.4 max | VDC<br>VDC       |
| Duty cycle                    | DC                   | @ 50% of signal                                                                                                        | 45...55            | %                |
| Rise time / Fall time, max.   | $t_r / t_f$          | 20%~80% $V_{out}$ , 80%~20% $V_{out}$ ,                                                                                | 3                  | ns               |
| Jitter, RMS, max.             | J                    | $1\sigma$ , 12KHz < $F_j$ < 20MHz                                                                                      | 1.0                | ps               |
| Overall freq. stability, max. | $\Delta f/f_c$       | Inclusive of $25^\circ$ Tolerance, Operating Temperature Range, Voltage & Load Variations, Aging, Shock and Vibration. | $\pm 50$           | ppm              |
| Output Enabled / Disabled     | $E_n$<br>$Dis$       | Pin 1: High Voltage or No Connect, Pin 3 Enabled<br>Pin 1: Ground, Pin 3 Disabled                                      | 2.2 min<br>0.8 max | VDC<br>VDC       |
| Operating temperature range   | $T_a$                | -                                                                                                                      | -10...+70          | $^\circ\text{C}$ |
| Storage temperature range     | $T(stg)$             | -                                                                                                                      | -55...+125         | $^\circ\text{C}$ |

#### MECHANICAL SPECIFICATION

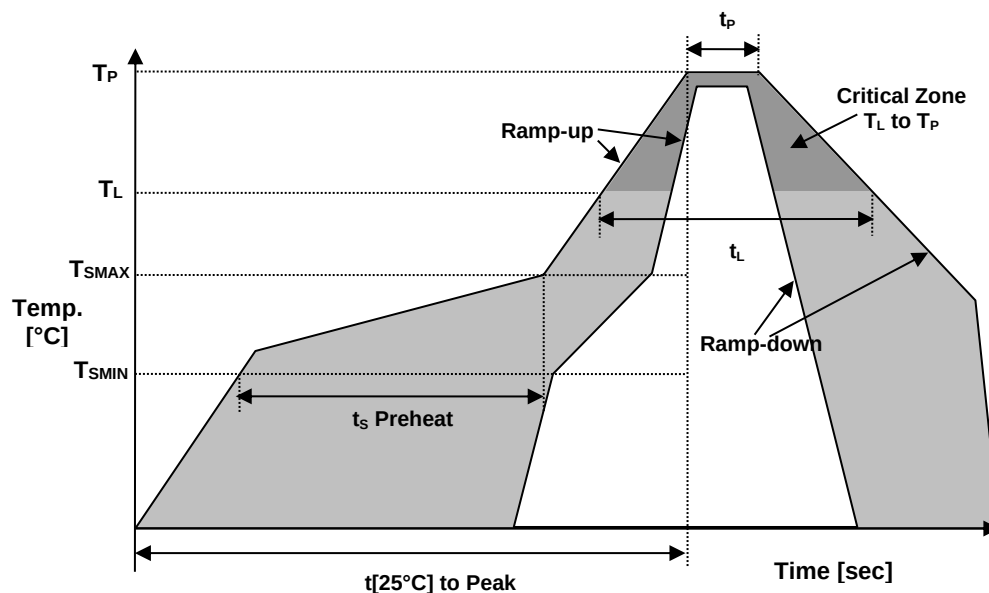


#### PACKAGING

254 mm REEL DIAMETER  
16 mm TAPE WIDTH, 8 mm PITCH  
QUANTITY: 1000 PIECES PER REEL  
IN ACCORDANCE WITH EIA-481

OUTLINE TOLERANCE:  $\pm 0.015"$  / 0.4mm (Unless otherwise specified)

### 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°C] to Peak Temperature    | t[25°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        |
| UNIT WEIGHT (grams)        | 0.155     |





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## CLOCK OSCILLATOR

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CO4305-32.768-T-TR

### ● MARKING

Rxx32.76

•3Byww

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    |      |      |

### ● APPROVAL

|              |                                                                    |
|--------------|--------------------------------------------------------------------|
| DRAWN BY:    | KJackson, March 9, 2016                                            |
| APPROVED BY: | KJackson, March 9, 2016                                            |
| REVISION:    | A, Initial Release<br>B, Updated to current spec levels KJ 9/22/22 |

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