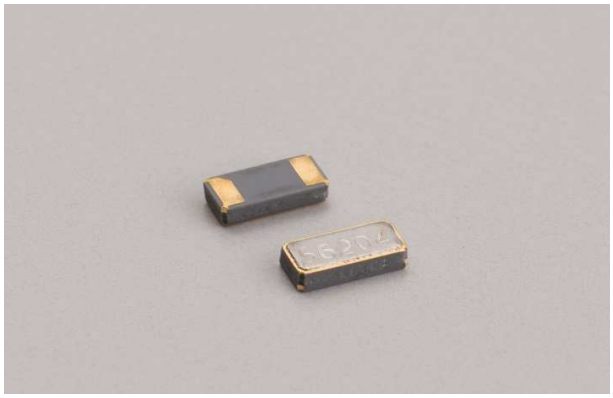
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# TUNING FORK CRYSTAL UNIT (SMD · Ceramic Package)

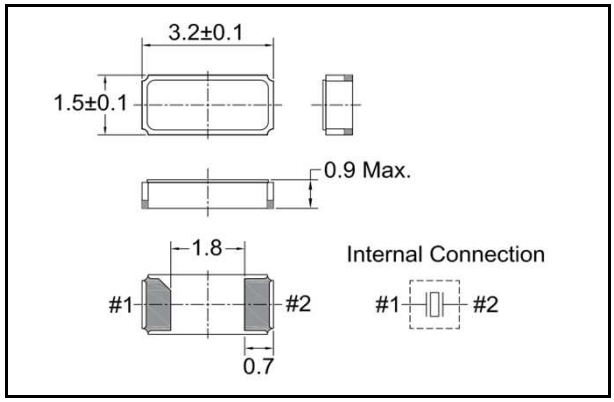
**RoHS compliant / Pb free** | **CM315D** | **3,000pcs/reel**



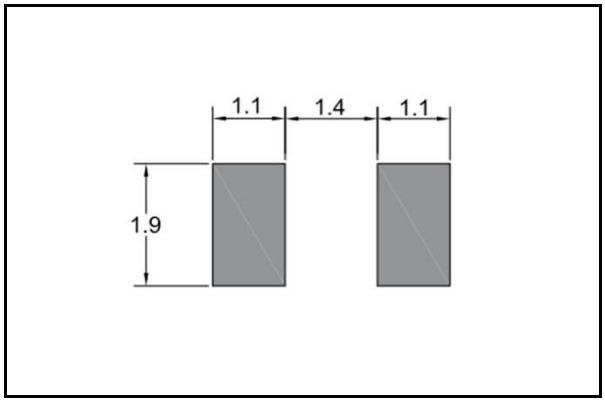
## ■ FEATURES

- Frequency range : 32.768kHz
- External dimensions (mm)
  L : 3.2 x W : 1.5 x H : 0.9
- Applications
  Smart Meters / Small mobile devices / Consumer products

## ■ DIMENSION [mm]




## ■ SOLDER PAD LAYOUT [mm]




## ■ STANDARD SPECIFICATIONS

| Item / Model | | CM315D | Conditions |
|---|---|---|---|
| Nominal Frequency | $f_0$ | 32.768kHz | |
| Frequency Tolerance | $\Delta f/f_0$ | ±5ppm / ±10ppm / ±20ppm | at 25℃ |
| Load capacitance | $C_L$ | 6.0pF / 7.0pF / 9.0pF / 12.5pF | Please specify your requirement |
| Operating Temperature Range | $T_{OPR}$ | −40℃ ～ +85℃ | |
| Storage Temperature Range | $T_{STR}$ | −55℃ ～ +125℃ | |
| Turnover Temperature | $T_M$ | 25℃±5℃ | |
| Temperature Coefficient | $\beta$ | −0.034±0.006ppm/℃$^2$ | |
| Motional (series) resistance | $R_1$ | 70KΩ Max. | at 25℃ |
| Level of drive | $D_L$ | 1μW Max. | |
| Aging (first year) | $\Delta f/f_0$ | ±3ppm Max. | 25℃±3℃ |
| Shunt capacitance | $C_0$ | 0.95pF Typ. | |


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## ■ PART NUMBERING SYSTEM

CM315D 32768 D Z F T - □□□

**Frequency**
Please specify the frequency in Hz.

**Frequency Tolerance (at 25℃)**

| | |
|---|---|
| D | ±20ppm (STD) |
| E | ±10ppm |
| H | ±5ppm |

**Frequency Tolerance over Operating Temp. Range**

| | |
|---|---|
| Z | Standard Spec. |

**Load capacitance (CL)**

| | |
|---|---|
| B | 6.0pF |
| C | 9.0pF (STD) |
| F | 12.5pF (STD) |
| Y | 7.0pF |

**Package specification**

| | |
|---|---|
| T | Only Tape & Reel |

**CITIZEN management code**
Ref. Code for internal use.

*Please contact us for specifications available.

## ■ Part Marking [standard]

ym###

y : The last digit of production year

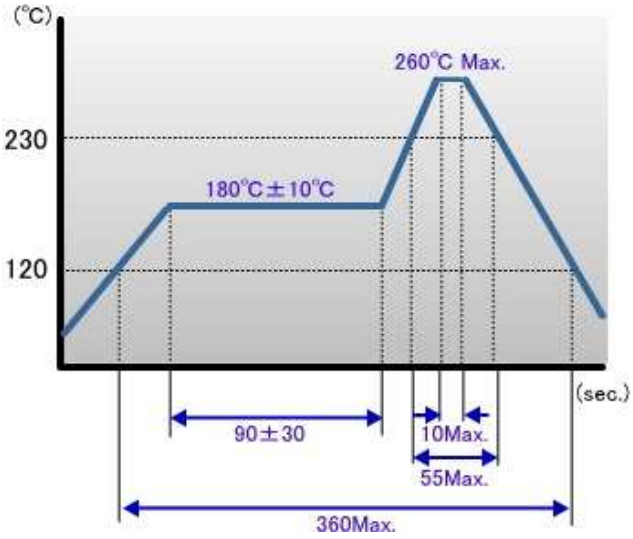
m : Production month (See Table.1)

# : Production Lot No.

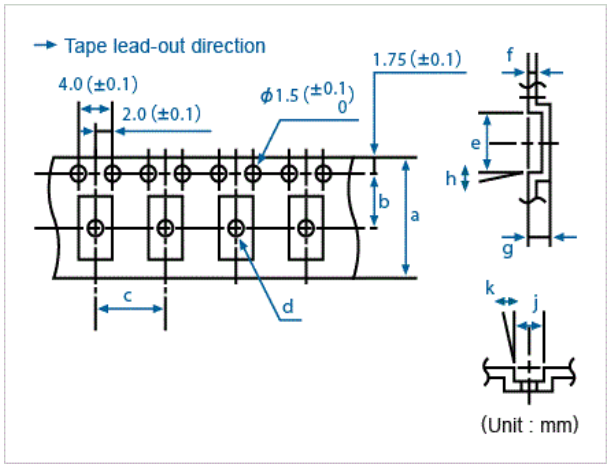
Table.1

| Month | Jan | Feb | ··· | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|
| Code | 1 | 2 | ··· | 9 | X | Y | Z |

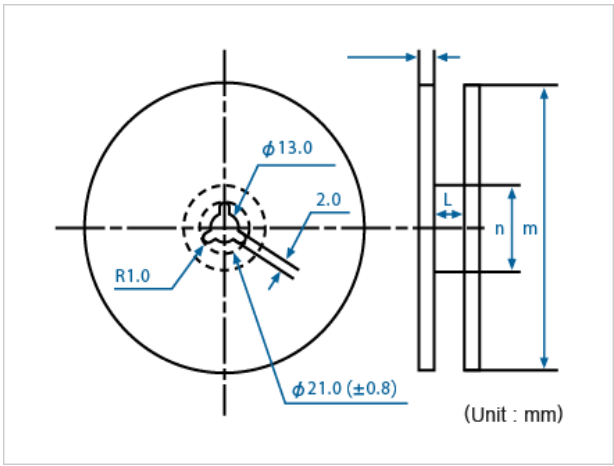
## ■ Reflow profile




## ■ Packing




Conforming to JIS C 0806 TB1208NEIAJ and RC-1009B TE1208N




Conforming to JIS C 0806 R12R and EIAJ RC-1009B R15

| Q'ty/reel | a | b | c | d (φ) | e | f | g | h | j | k | l | m (φ) | n (φ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3,000 | 12.0 | 5.5 | 4.0 | 1.0 | 3.6 | 0.3 | 1.0 | 5° | 1.9 | 5° | 13.0 | 180 | 60 |

Product specifications are subject to change without notice.

Rev.2

深圳市满度科技有限公司
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