## imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



### Contact us

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# CITIZEN

#### TUNING FORK CRYSTAL UNIT (SMD · Ceramic Package)

RoHS compliant / Pb free

■ DIMENSION [mm]

### CM1610H

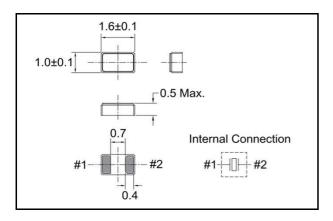
#### 5,000pcs/reel

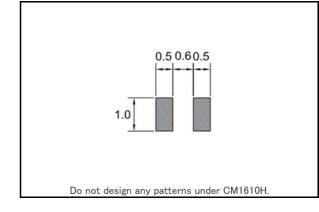


#### FEATURES

- Ultra-lightweight microminiature TF Crystal units SMD type
- Frequency range : 32.768kHz
- External dimensions (mm)
  L : 1.6 x W : 1.0 x H : 0.5
- Applications
  Small communication devices

#### SOLDER PAD LAYOUT [mm]



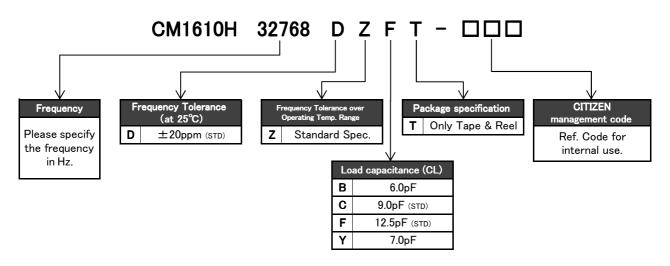


#### STANDARD SPECIFICATIONS

| Item                         | Model  | СМ1610Н  | Conditions                      |  |  |  |
|------------------------------|--------|--|---------------------------------|--|--|--|
| Nominal Frequency            | fo     | 32.768kHz  |                                 |  |  |  |
| Frequency Tolerance          | ∆ f∕fo | ±20ppm   | at 25°C                         |  |  |  |
| Load capacitance             | CL     | 6.0pF / 7.0pF / 9.0pF / 12.5pF                       | Please specify your requirement |  |  |  |
| Operating Temperature Range  | Topr   | -40°C ∼ +85°C  |                                 |  |  |  |
| Storage Temperature Range    | Tstr   | −55°C ~ +125°C                                       |                                 |  |  |  |
| Turnover Temperature         | Тм     | 25°C±5°C   |                                 |  |  |  |
| Temperature Coefficient      | β      | $(-0.036 \pm 10\%) \text{ ppm/}^{\circ}\text{C}^{2}$ |                                 |  |  |  |
| Motional (series) resistance |        | 90KΩ Max.  | at 25°C                         |  |  |  |
| Level of drive               | DL     | 0.5 <i>μ</i> W Max.                                  |                                 |  |  |  |
| Aging (first year)           | ∆ f∕fo | ±3ppm Max.   | 25°C±3°C                        |  |  |  |
| Shunt capacitance            | Co     | 1.2pF Typ.   |                                 |  |  |  |

# CITIZEN

#### PART NUMBERING SYSTEM



\*Please contact us for specifications available.

#### ■ Part Marking [standard]



- C : Manufacture's ID Code
- y : The last digit of production year
- w : Production week code

\*: CL Code B:6.0pF C:9.0pF

Tape lead-out direction

2.0 (±0.1)

Packing

4.0 (±0.1)

| F: | 12.5pF |
|----|--------|
| Y: | 7.0pF  |

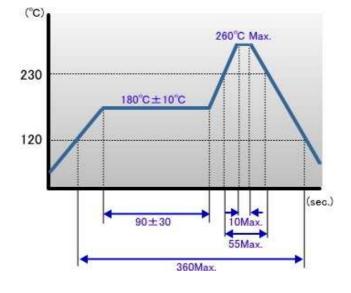
\$\$1.5 (±0.1)

1.75(±0.1)

h

(Unit : mm)

#### Reflow profile



### 

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

| Q'ty/reel | а   | b   | С   | $d(\phi)$ | е   | f    | g   | h  | j   | k  | Ι   | m(¢) | n(¢) |
|-----------|-----|-----|-----|-----------|-----|------|-----|----|-----|----|-----|------|------|
| 5,000     | 8.0 | 3.5 | 4.0 | 0.5       | 1.8 | 0.23 | 0.6 | 5° | 1.2 | 5° | 9.0 | 180  | 60   |

Rev.1

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