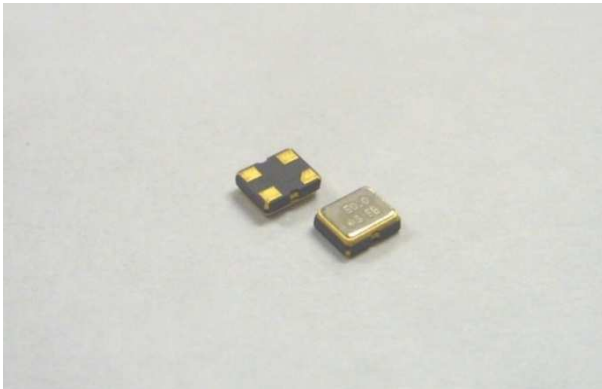


CRYSTAL CLOCK OSCILLATORS (SMD · Ceramic Package)

RoHS compliant / Pb free

CSX-252F

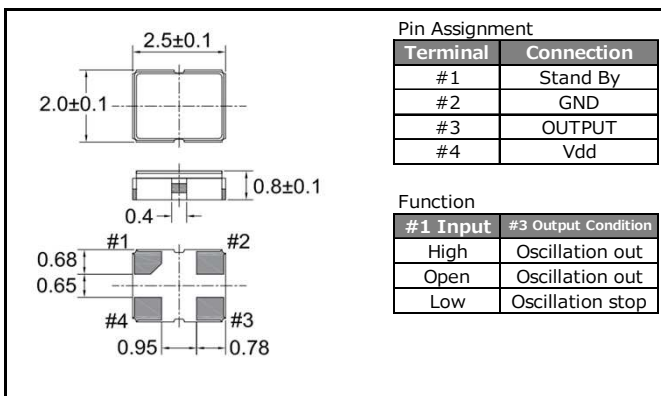
3,000pcs/reel



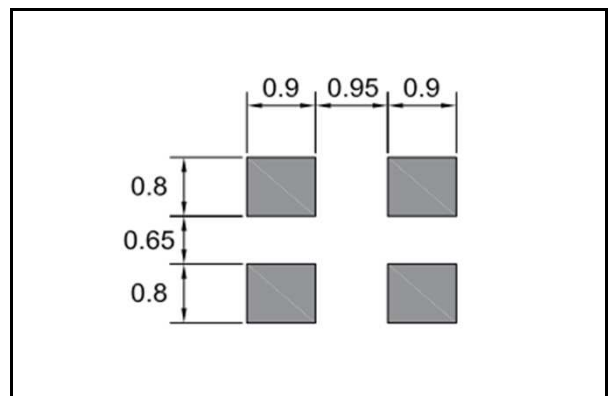
FEATURES

- Low current consumption type
- Frequency range : 1.0 ~ 39.9MHz
- External dimensions (mm)
L : 2.5 x W : 2.0 x H : 0.8
- Applications
Small mobile devices / Consumer products

DIMENSION [mm]



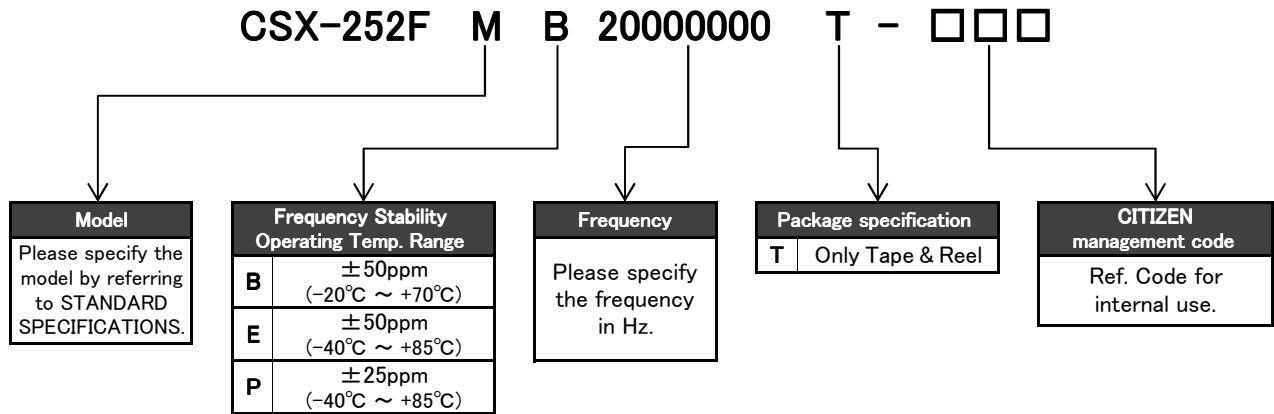
SOLDER PAD LAYOUT [mm]



STANDARD SPECIFICATIONS

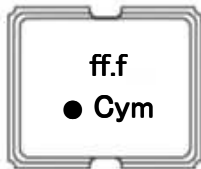
| Item | Model | OE | | | | |
|---|----------------------|----------|--|-------------------|-----------------|--------------|
| | | STAND-BY | CSX-252FM(*) | CSX-252FH(*) | CSX-252FJ(*) | CSX-252FA(*) |
| Frequency Range | | | 32.768kHz, 2.000MHz ~ 60.000MHz | | | |
| Supply Voltage | | | 1.8V±5% | 2.5V±5% | 3.3V±0.3V | 1.8V ~ 3.3V |
| Frequency Stability | | (*) | B: ±50ppm(-20°C ~ +70°C), E: ±50ppm(-40°C ~ +85°C) P: ±25ppm(-40°C ~ +85°C) *Only 32.768kHz | | | |
| Operating Temperature Range | | | -20°C ~ +70°C / (-40°C ~ +85°C) | | | |
| Storage Temperature Range | | | -45°C ~ +90°C | | | |
| Current consumption | | | 2.5mA Max: ~30MHz | 4.5mA Max: ~19MHz | 6mA Max: ~19MHz | |
| | | | 3.0mA Max: ~40MHz | 5.5mA Max: ~40MHz | 7mA Max: ~40MHz | |
| | | | 3.5mA Max: ~60MHz | 6.5mA Max: ~60MHz | 8mA Max: ~60MHz | |
| Duty | TTL level (1.4V) | | - | | | |
| | CMOS level (1/2 Vdd) | | 45% ~ 55% | | | |
| Output Voltage | V _{OH} | | 0.9Vdd Min. | | | |
| | V _{OL} | | 0.1Vdd Max. | | | |
| Output Load | TTL | | - | | | |
| | CMOS | | 15pF Max. | | | |
| Rise and Fall Time CMOS (20%Vdd ↔ 80%Vdd) | | | 10nsec Max. | | | |
| Start-up time | | | 10msec Max. (Time at minimum operating voltage to be 0sec.) | | | |
| Input Voltage (ST) | V _{IH} | | 0.7Vdd Min. | | | |
| | V _{IL} | | 0.2Vdd Max. | | | |
| Disable current | | | - | | | |
| Stand-by current | | | 50 μA Max. | | | |

■ PART NUMBERING SYSTEM



*Please contact us for specifications available.

■ Part Marking [standard]



f : The first 4 digits of Frequency including the decimal point

C : Manufacture's ID Code

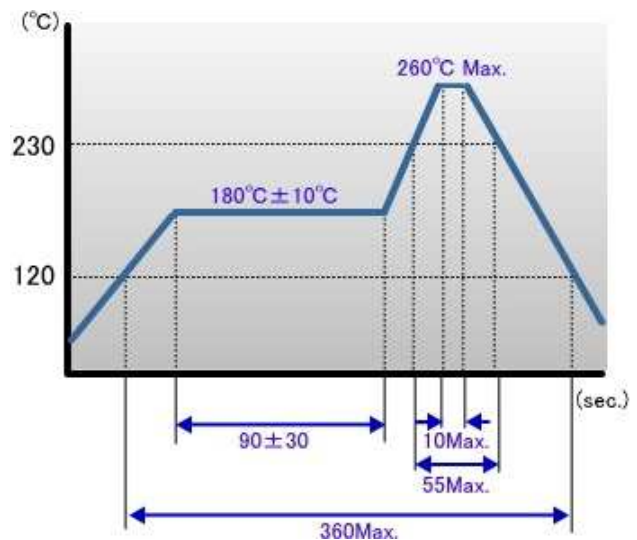
y : The last digit of production year

m : Production month (See Table.1)

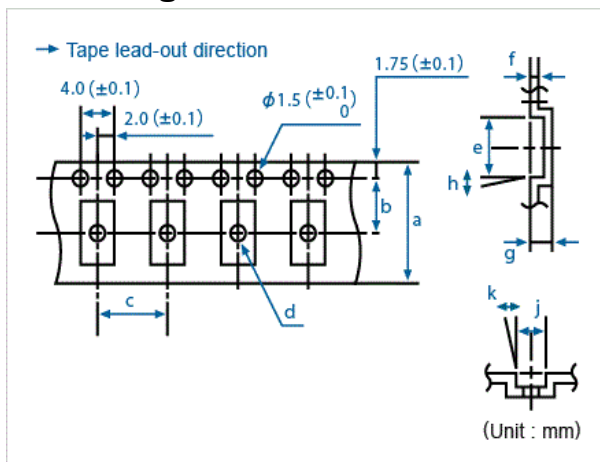
Table.1

| | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|
| Month | Jan | Feb | ... | Aug | Sep | ... | Dec |
| Code | A | B | ... | H | J | ... | M |

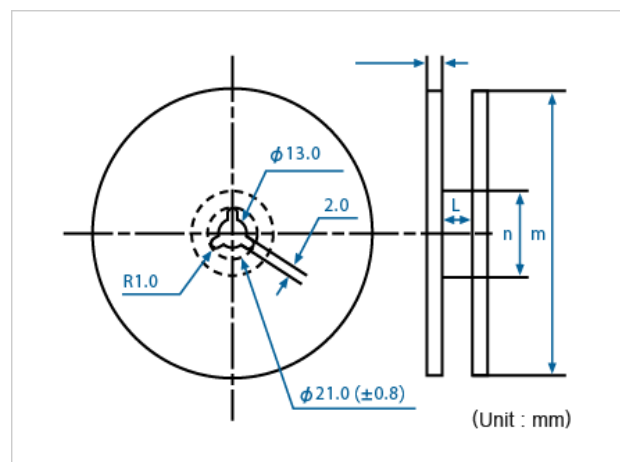
■ Reflow profile



■ 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 | 8.0 | 3.5 | 4.0 | 1.1 | 2.7 | 0.25 | 1.15 | 5° | 2.25 | 5° | 9.0 | 180 | 60 |

Product specifications are subject to change without notice.

Rev.3