

Product name FA-238 28.636360 MHz 10.0 +50.0-50.0

Product Number / Ordering code Q22FA23800841xx

Please refer to the 5.Packing information about xx (last 2 digits)

Pb free / Complies with EU RoHS directive

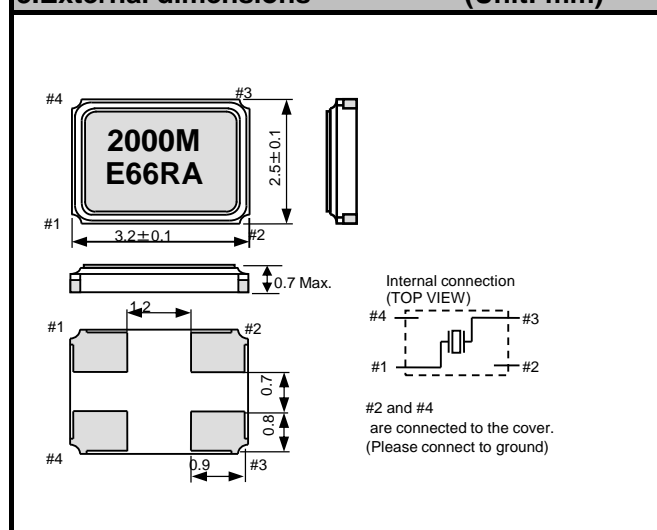
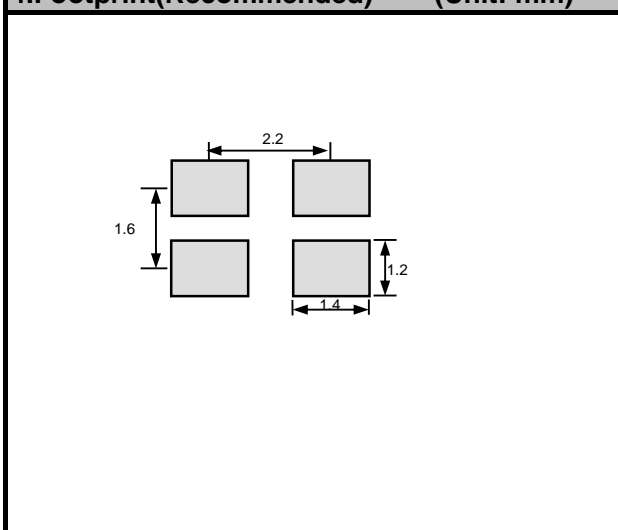
Reference weight Typ. 16 mg

1.Absolute maximum ratings

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions / Remarks |
|-----------------------|--------|------|------|------|------|---------------------------|
| Storage temperature | T_stg | -40 | - | +125 | °C | Storage as single product |
| Operating temperature | T_use | -40 | - | +105 | °C | |

2.Specifications(characteristics)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions / Remarks |
|--------------------------------------|--------|------|-----------|------|------------------------|----------------------|
| Nominal frequency | f_nom | — | 28.636360 | — | MHz | Fundamental |
| Frequency tolerance | f_tol | -50 | - | +50 | x 10 ⁻⁶ | @+25°C |
| Frequency Stability over temperature | f_tem | -30 | - | +30 | x 10 ⁻⁶ | -20°C to +70°C |
| Operating temperature | T_use | -20 | - | +70 | °C | |
| Level of drive | DL | 10 | 100 | 200 | μW | |
| Load capacitance | CL | — | 10 | — | pF | |
| Motional resistance (ESR) | R1 | - | - | 50 | Ω | |
| Motional capacitance | C1 | - | 3.45 | - | fF | |
| Motional inductance | L1 | - | 8.96 | - | mH | |
| Shunt capacitance | C0 | - | 1.14 | - | pF | |
| Frequency aging | f_age | -5 | — | +5 | x10 ⁻⁶ /yea | @+25°C, First year |

3.External dimensions (Unit: mm)**4.Footprint(Recommended) (Unit: mm)****5.Packing information**

[1] Product number last 2 digits code (xx) description

The recommended code is "17"

Q22FA23800841xx

| Code | Condition | Code | Condition |
|------|------------------------------|------|----------------|
| 01 | Any Q'ty vinyl bag(Tape cut) | 14 | 1000pcs / Reel |
| 11 | Any Q'ty / Reel | 15 | 2000pcs / Reel |
| 12 | 250pcs / Reel | 00 | 3000pcs / Reel |
| 13 | 500pcs / Reel | 17 | 4000pcs / Reel |

[2] Taping specification

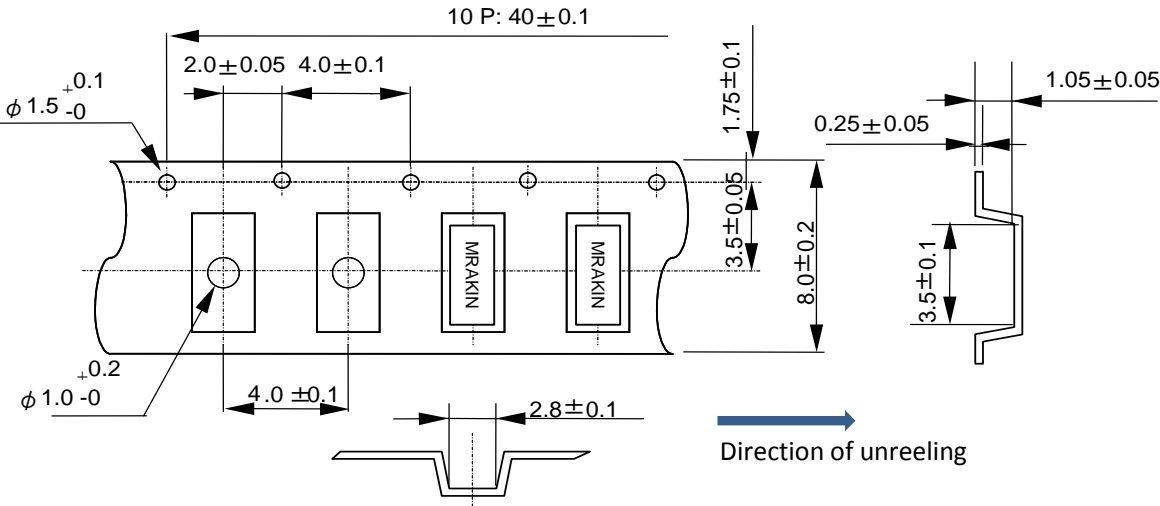
Subject to EIA-481 & IEC-60286

(1) Tape dimensions TE0804L

Material of the Carrier Tape : PS

Material of the Top Tape : PET+PE

Unit: mm

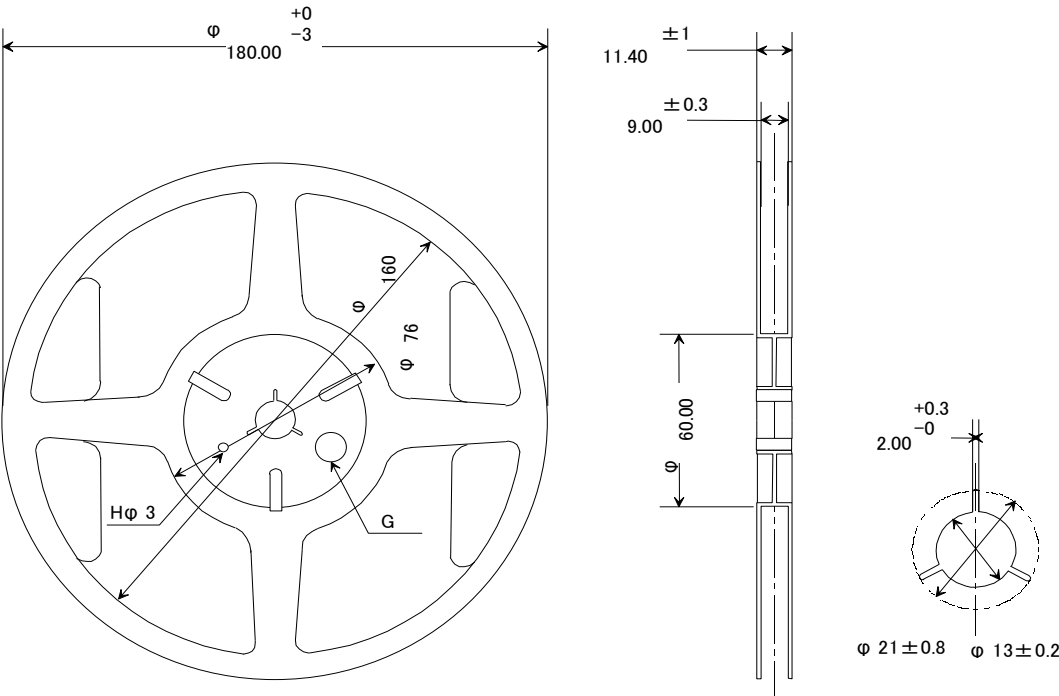


(2) Reel dimensions

Center material : PS

Material of the Reel : PS

Unit: mm



6.Reflow profile

Reflow condition

Pre Heating Temperature

$T_{p1} \sim T_{p2} = +170^{\circ}\text{C}$

Heating Temperature

$T_{Mlt} = +220^{\circ}\text{C}$

Peek Temperature

$T_{Max.} = +260^{\circ}\text{C}$

Point of measuring

In case of Solderability
Terminal.

In case of Resistance to soldering heat
Surface.

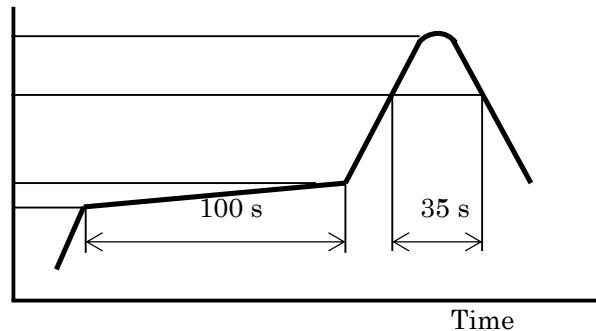
Temperature

$T_{Max.}$

T_{Mlt}

T_{p2}

T_{p1}



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