

Product name FA2016AA 25.000000 MHz 8.0 +15.0-15.0

AEC-Q200 compliant

Product Number / Ordering code X1E000381A131xx

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

Pb free / Complies with EU RoHS directive

Reference weight Typ. 7 mg

**1.Absolute maximum ratings**

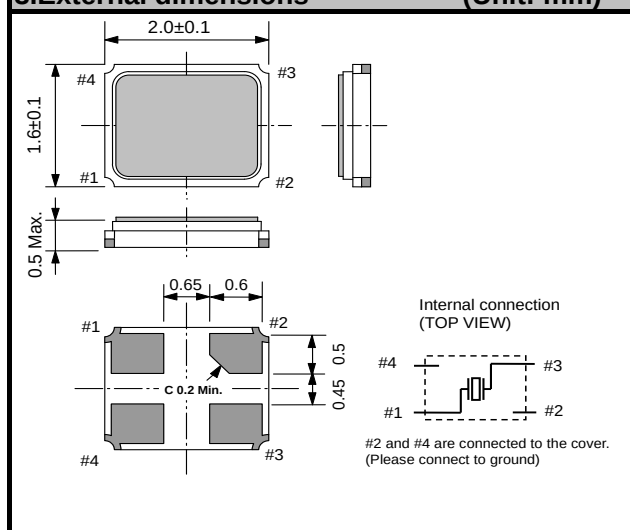
| Parameter             | Symbol | Min. | Typ. | Max. | Unit | Conditions / Remarks      |
|-----------------------|--------|------|------|------|------|---------------------------|
| Storage temperature   | T_stg  | -40  | -    | +125 | °C   | Storage as single product |
| Operating temperature | T_use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

**2.Specifications(characteristics)**

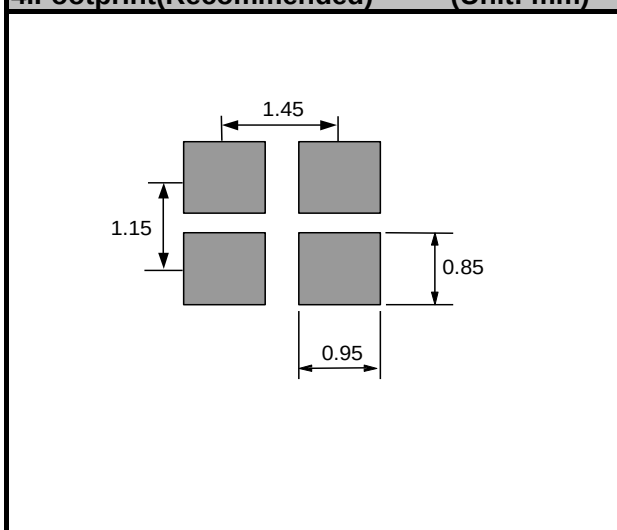
| Parameter                            | Symbol | Min. | Typ.      | Max. | Unit                   | Conditions / Remarks |
|--------------------------------------|--------|------|-----------|------|------------------------|----------------------|
| Nominal frequency                    | f_nom  | -    | 25.000000 | -    | MHz                    | Fundamental          |
| Frequency tolerance                  | f_tol  | -15  | -         | +15  | x 10 <sup>-6</sup>     | @+25°C               |
| Frequency Stability over temperature | f_tem  | -50  | -         | +50  | x 10 <sup>-6</sup>     | -40°C to +125°C      |
| Operating temperature                | T_use  | -40  | -         | +125 | °C                     |                      |
| Level of drive                       | DL     | 1    | 100       | 200  | μW                     |                      |
| Load capacitance                     | CL     | -    | 8.0       | -    | pF                     |                      |
| Motional resistance (ESR)            | R1     | -    | -         | 80   | Ω                      |                      |
| Motional capacitance                 | C1     | -    | 1.99      | -    | fF                     |                      |
| Motional inductance                  | L1     | -    | 20.91     | -    | mH                     |                      |
| Shunt capacitance                    | C0     | -    | 0.62      | -    | pF                     |                      |
| Frequency aging                      | f_age  | -3   | -         | +3   | x10 <sup>-6</sup> /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 "18"

X1E000381A131xx

| Code | Condition                    | Code | Condition      |
|------|------------------------------|------|----------------|
| 01   | Any Q'ty vinyl bag(Tape cut) | 00   | 3000pcs / Reel |
| 11   | Any Q'ty / Reel              | 18   | 5000pcs / Reel |
| 12   | 250pcs / Reel                |      |                |
| 14   | 1000pcs / Reel               |      |                |

Technical drawing of a component, labeled 10P : 40±0.15. The drawing includes a top view, a side view, and a cross-sectional view.

**Top View Dimensions:**

- Overall width: 10P : 40±0.15
- Overall height: 8.0±0.2
- Top edge features:
  - Leftmost feature:  $\phi 1.5 -0^{+0.1}$
  - Second feature from left:  $2.0 \pm 0.1$
  - Third feature from left:  $4.0 \pm 0.1$
- Bottom edge features:
  - Leftmost feature:  $\phi 0.5 \pm 0.05$
  - Second feature from left:  $4.0 \pm 0.1$
  - Third feature from left:  $1.8 \pm 0.1$
- Internal features:
  - Two circular holes:  $\phi 1.5 -0^{+0.1}$
  - Two rectangular features labeled "Epson"
- Right edge features:
  - Top edge:  $1.75 \pm 0.1$
  - Bottom edge:  $3.5 \pm 0.05$

**Side View Dimensions:**

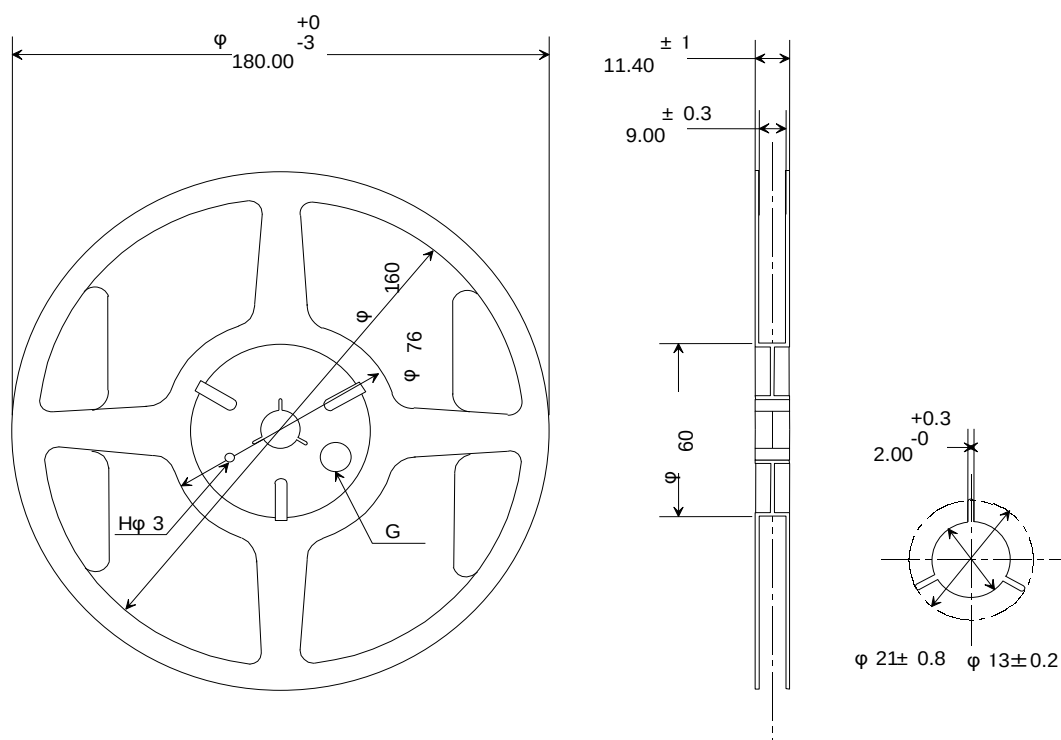
- Overall width:  $0.25 \pm 0.05$
- Overall height:  $2.2 \pm 0.1$
- Top edge feature:  $0.7 \pm 0.1$

**Cross-sectional View:**

- Overall width:  $1.8 \pm 0.1$

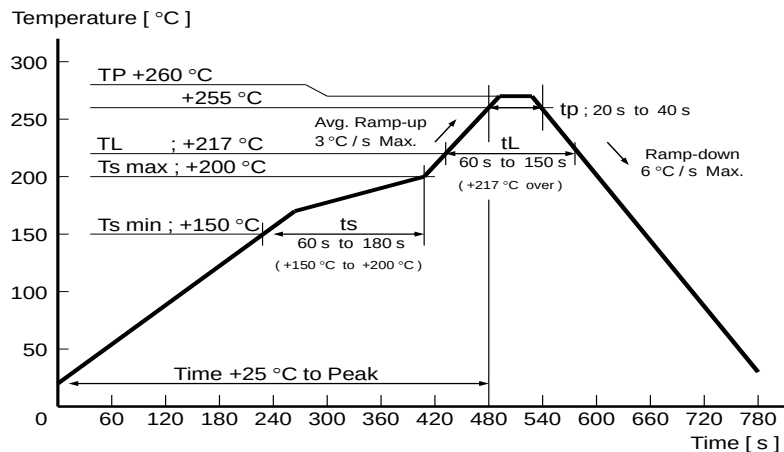
**Direction of unreeling:** Indicated by a blue arrow pointing to the right.

## Unit: mm



## 6. Reflow profile

Reflow condition (Follow of JEDEC STD-020D.01)



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