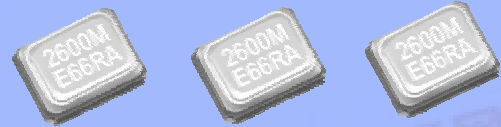


## MHz RANGE CRYSTAL UNIT ULTRA MINIATURE SIZE LOW PROFILE SMD

### FA-128

- Nominal frequency range : 24 MHz to 54 MHz
- Thickness : 0.5mm Max.
- Overtone order : Fundamental
- Applications : Mobile phone, Bluetooth, W-LAN  
ISM band radio, Clock for MPU



Actual size

### Specifications (characteristics)

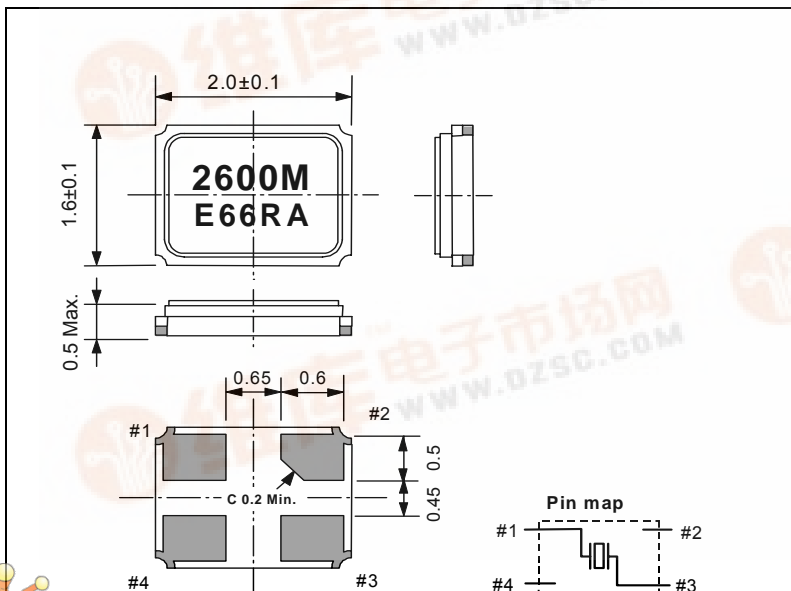
| Item  | Symbol         | Specifications                     |                                    | Remarks  |
|---|----------------|------------------------------------|------------------------------------|--|
|   |                | For RF Reference                   | For Clock                          |  |
| Nominal frequency range                                 | f              | 24.000 MHz to 54.000 MHz           |                                    | Fundamental<br>Please contact us for inquiries regarding the available frequencies.          |
| Storage temperature range                               | T_stg          | -40 °C to +125 °C                  |                                    | Store as bare product after unpacking.   |
| Operating temperature range                             | T_use          | -40 °C to +85 °C                   |                                    |  |
| Level of drive  | DL             | 50 μW Max.                         | 100 μW Max.                        |  |
| Frequency tolerance (standard)                          | f_tol          | $\pm 10 \times 10^{-6}$            | $\pm 30 \times 10^{-6}$            | +25 °C<br>For the out of standard specifications, please contact us for inquiries.           |
| Frequency versus temperature characteristics (standard) | f_tem          | $\pm 10 \times 10^{-6}$            | $\pm 30 \times 10^{-6}$            | -20 °C to +75 °C<br>For the out of standard specifications, please contact us for inquiries. |
| Load capacitance  | CL             | 8 pF to ∞                          |                                    | Please specify.  |
| Motional resistance (ESR)                               | R <sub>1</sub> | As per below table                 |                                    | -20 °C to +75 °C   |
| Frequency aging   | f_age          | $\pm 1 \times 10^{-6}$ / year Max. | $\pm 5 \times 10^{-6}$ / year Max. | +25 °C, First year   |

### Motional resistance (ESR)

| Frequency               | Motional resistance |
|-------------------------|---------------------|
| 24.0 MHz ≤ f < 26.0 MHz | 80 Ω Max.           |
| 26.0 MHz ≤ f ≤ 54.0 MHz | 60 Ω Max.           |

### External dimensions

(Unit:mm)



#2 and #4 are connected to the cover.  
(Please connect to ground)

### Footprint (Recommended)

(Unit:mm)

