



## MHz RANGE CRYSTAL UNIT

## FA-128

Product Number  
Q22FA1280xxxx18

- Nominal frequency range : 16 MHz to 54 MHz
- External dimensions : 2.0 × 1.6 × 0.5 mm
- Overtone order : Fundamental
- Applications : Mobile phone, Bluetooth, W-LAN  
ISM band radio, Clock for MPU



## Specifications (characteristics)

Item	Symbol	Specifications		Conditions / Remarks
		For RF Reference	For Clock	
Nominal frequency range	f_nom	16.000 MHz to 54.000 MHz		Fundamental Please contact us about available frequencies.
Storage temperature range	T_stg	-40 °C to +125 °C		Storage as single product.
Operating temperature range	T_use	-40 °C to +85 °C (+105 °C)		Please contact us about +85 °C < T_use
Level of drive	DL	100 μW Max.	200 μW Max.	Recommended: 1 to 100 μW
Frequency tolerance (standard)	f_tol	±10 × 10 <sup>-6</sup> *1	±30 × 10 <sup>-6</sup>	+25 °C, please contact us for requirements not listed in this specification.
Frequency versus temperature characteristics. (standard)	f_tem	±10 × 10 <sup>-6</sup> *1	±30 × 10 <sup>-6</sup>	-20 °C to +75 °C, please contact us for requirements not listed in this specification.
Load capacitance	CL	6 pF to ∞		Please specify.
Motional resistance (ESR)	R1	As per table below		-20 °C to +75 °C
Frequency aging	f_age	±1 × 10 <sup>-6</sup> / year Max.	±5 × 10 <sup>-6</sup> / year Max.	+25 °C, First year

\*1 Please contact us for available frequency tolerances as they are dependent upon the nominal frequency.

## Motional resistance (ESR)

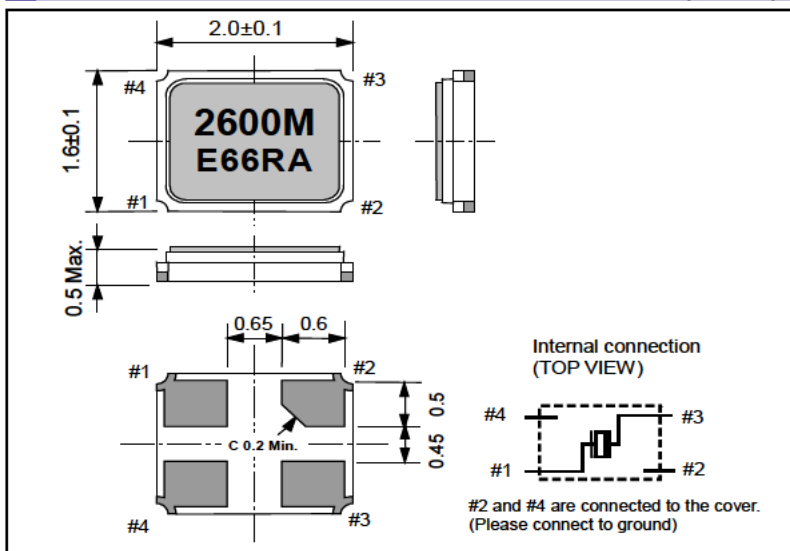
Frequency	Motional resistance
16.0 MHz ≤ f_nom < 18.0 MHz	200 Ω Max.
18.0 MHz ≤ f_nom < 20.0 MHz	150 Ω Max.
20.0 MHz ≤ f_nom < 24.0 MHz	100 Ω Max.
24.0 MHz ≤ f_nom < 26.0 MHz	80 Ω Max.
26.0 MHz ≤ f_nom ≤ 54.0 MHz	60 Ω Max.

Product name FA-128 24.000000MHz 12.0 +10.0-10.0  
(Standard form) ① ② ③ ④①Model ②Frequency ③Load capacitance(pF) ④Frequency tolerance(× 10<sup>-6</sup>, +25 °C)

In addition to the above mentioned specification item, please specify frequency temperature characteristics and operating temperature range in case of inquiry.

## External dimensions

(Unit:mm)



## Footprint (Recommended)

(Unit:mm)

