



## MHZ RANGE CRYSTAL UNIT

## FA-20H

Product Number  
Q24FA20H0xxx18

- Nominal frequency range : 12 MHz to 54 MHz
- External dimensions : 2.5× 2.0×0.55 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 <sub>nom</sub>	12.000 MHz to 54.000 MHz		Fundamental Please contact us about available frequencies.
Storage temperature range	T <sub>stg</sub>	-40 °C to +125 °C		Storage as single product.
Operating temperature range	T <sub>use</sub>	-40 °C to +85 °C (+105 °C)		Please contact us about +85 °C < T <sub>use</sub>
Level of drive	DL	100 μW Max.	200 μW Max.	Recommended: 1 μW to 100 μW
Frequency tolerance	f <sub>tol</sub>	±10 × 10 <sup>-6</sup>	±30 × 10 <sup>-6</sup>	+25 °C Please contact us for inquiries.
Frequency versus temperature characteristics	f <sub>tem</sub>	±10 × 10 <sup>-6</sup>	±30 × 10 <sup>-6</sup>	-20 °C to +75 °C Please contact us for inquiries.
Load capacitance	CL	6 pF to ∞		Please specify.
Motional resistance (ESR)	R1	As per table below		-20 °C to +75 °C
Frequency aging	f <sub>age</sub>	±1 × 10 <sup>-6</sup> to ±3 × 10 <sup>-6</sup> / year Max. *1		+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
12.0 MHz ≤ f <sub>nom</sub> < 16.0 MHz	150 Ω Max.
16.0 MHz ≤ f <sub>nom</sub> ≤ 25.0 MHz	80 Ω Max.
25.0 MHz < f <sub>nom</sub> ≤ 30.0 MHz	60 Ω Max.
30.0 MHz < f <sub>nom</sub> ≤ 35.0 MHz	50 Ω Max.
35.0 MHz < f <sub>nom</sub> ≤ 54.0 MHz	40 Ω Max.

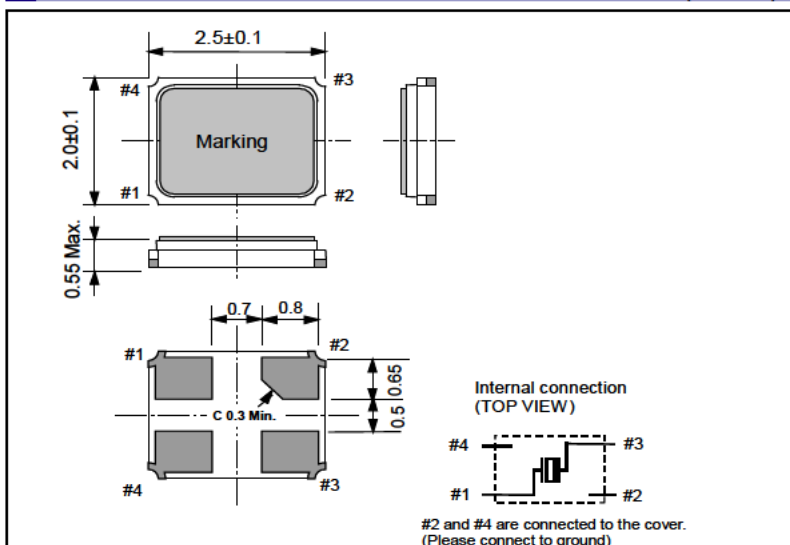
Product name FA-20H 24.000000MHz 12.0 +10.0-10.0  
(Standard form) ① ② ③ ④

①Model 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)

