

## MHz RANGE CRYSTAL UNIT

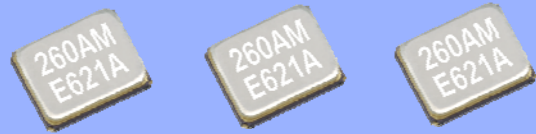
### ULTRA MINIATURE SIZE LOW PROFILE SMD

# FA-20H

- Nominal frequency range : 12 MHz to 48 MHz
- External dimensions : 2.5× 2.0×0.55 t (mm)
- Overtone order : Fundamental
- Applications : Mobile phone, Bluetooth, W-LAN  
ISM band radio, Clock for MPU



Product Number (please contact us)  
Q24FA20H0xxxx00



Actual size



### Specifications (characteristics)

Item	Symbol	Specifications		Remarks
		For RF Reference	For Clock	
Nominal frequency range	f_nom	12.000 MHz to 48.000 MHz		Fundamental 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	100 μW Max.	200 μW Max.	Recommended: 1 μW to 100 μW
Frequency tolerance	f_tol	$\pm 10 \times 10^{-6}$ to $\pm 30 \times 10^{-6}$ *1	$\pm 30 \times 10^{-6}$	+25 °C Please contact us for inquiries.
Frequency versus temperature characteristics	f_tem	$\pm 10 \times 10^{-6}$ to $\pm 30 \times 10^{-6}$ *1	$\pm 30 \times 10^{-6}$	-20 °C to +75 °C Please contact us for inquiries.
Load capacitance	CL	6 pF to ∞		Please specify.
Motional resistance (ESR)	R1	As per below table		-20 °C to +75 °C
Frequency aging	f_age	$\pm 1 \times 10^{-6}$ to $\pm 3 \times 10^{-6}$ / year Max. *1		+25 °C, First year

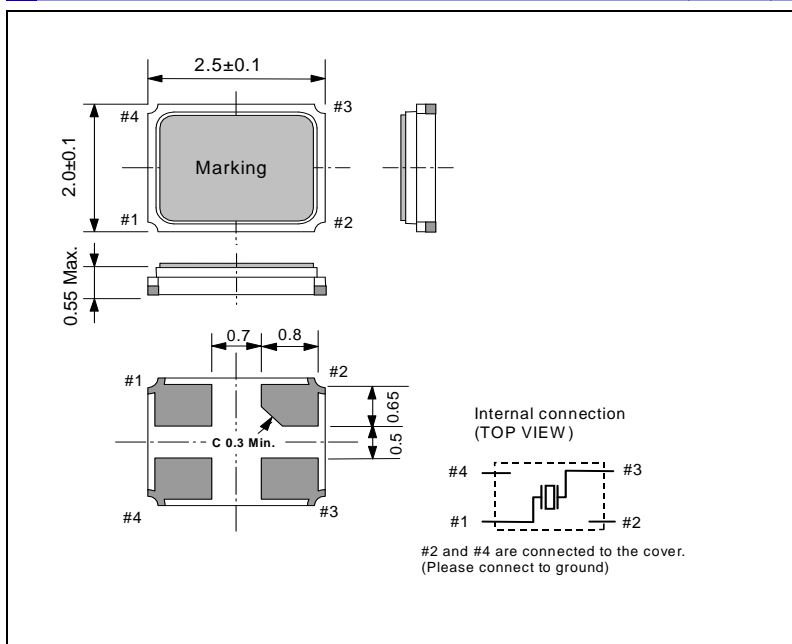
\*1 Please contact us for inquiries regarding available frequency tolerance.

### Motional resistance (ESR)

Frequency	Motional resistance
12.0 MHz ≤ f_nom < 16.0 MHz	150 Ω Max.
16.0 MHz ≤ f_nom ≤ 25.0 MHz	80 Ω Max.
25.0 MHz < f_nom ≤ 30.0 MHz	60 Ω Max.
30.0 MHz < f_nom ≤ 35.0 MHz	50 Ω Max.
35.0 MHz < f_nom ≤ 48.0 MHz	40 Ω Max.

### External dimensions

(Unit:mm)



### Footprint (Recommended)

(Unit:mm)

