MHz RANGE CRYSTAL UNIT

FA-20H

- 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

Pb Free
RoHS Compliant

Product Number (please contact us)
Q24FA20H0xxxx00

Actual size

Specifications (characteristics)

Item	Symbol	Specifications		Conditions / Remarks
		For RF Reference	For Clock	
Nominal frequency range	f_nom	12.000 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		
Level of drive	DL	100 µW Max.	200 µW Max.	Recommended: 1 µW to 100 µW
Frequency tolerance	f_tol	$\pm10 \times 10^{-6}$ to $\pm30 \times 10^{-6}$ *1	$\pm30 \times 10^{-6}$	+25 °C Please contact us for inquiries.
Frequency versus temperature characteristics	f_tem	$\pm10 \times 10^{-6}$ to $\pm30 \times 10^{-6}$ *1	$\pm30 \times 10^{-6}$	-20 °C to +75 °C Please contact us for inquiries.
Load capacitance	CL	6 pF to ∞		Please specify.
Motional resistance (ESR)	R1	As per table below		-20 °C to +75 °C
Frequency aging	f_age	$\pm1 \times 10^{-6}$ to $\pm3 \times 10^{-6}$ / 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_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 ≤ 54.0 MHz	40 Ω Max.

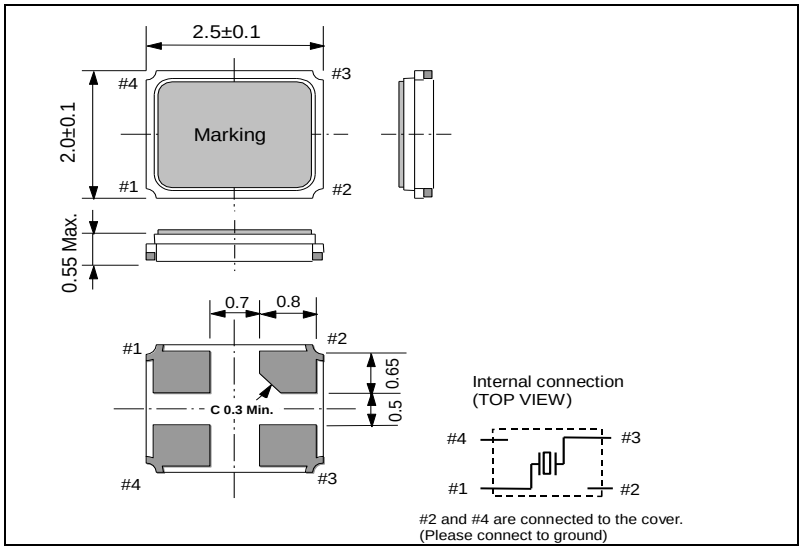
Product name (Standard form)

FA-20H ① 24.000000MHz ② 12.0 ③ +10.0-10.0 ④

①Model ②Frequency ③Load capacitance(pF) ④Frequency tolerance(× 10^{-6}, +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)