



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 mm
- Overtone order : Fundamental
- Applications : Mobile phone, Bluetooth, W-LAN
ISM band radio, Clock for MPU



Product Number (please contact us)
Q24FA20H0xxx00



Actual size



Specifications (characteristics)

Item	Symbol	Specifications		Conditions / 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.
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}	±10 × 10 ⁻⁶ to ±30 × 10 ⁻⁶ *1	±30 × 10 ⁻⁶	+25 °C Please contact us for inquiries.
Frequency versus temperature characteristics	f _{tem}	±10 × 10 ⁻⁶ to ±30 × 10 ⁻⁶ *1	±30 × 10 ⁻⁶	-20 °C to +75 °C Please contact us for inquiries.
Load capacitance	CL	6 pF to ∞		Please specify.
Motional resistance (ESR)	R ₁	As per below table		-20 °C to +75 °C
Frequency aging	f _{age}	±1 × 10 ⁻⁶ to ±3 × 10 ⁻⁶ / year Max. *1		+25 °C, First year

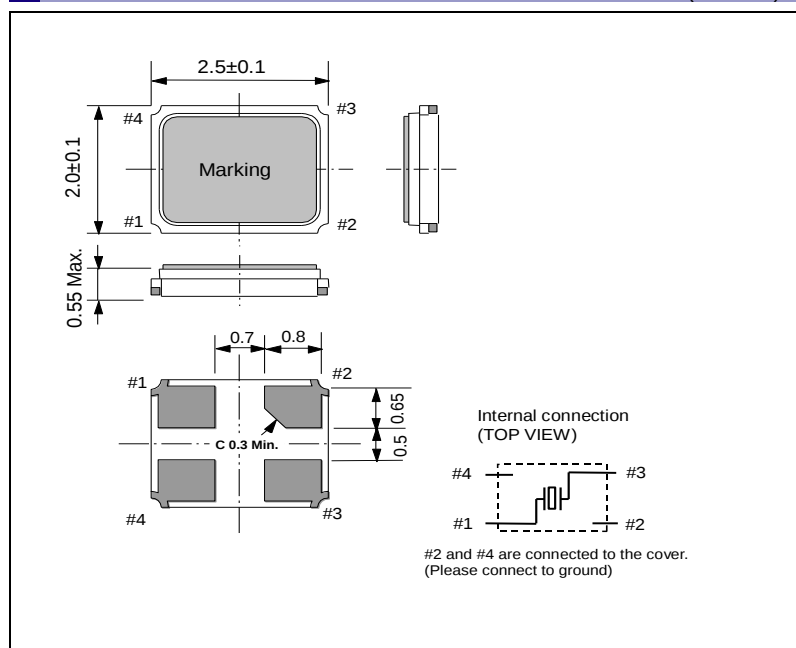
*1 Please contact us for inquiries regarding available frequency tolerance.

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.

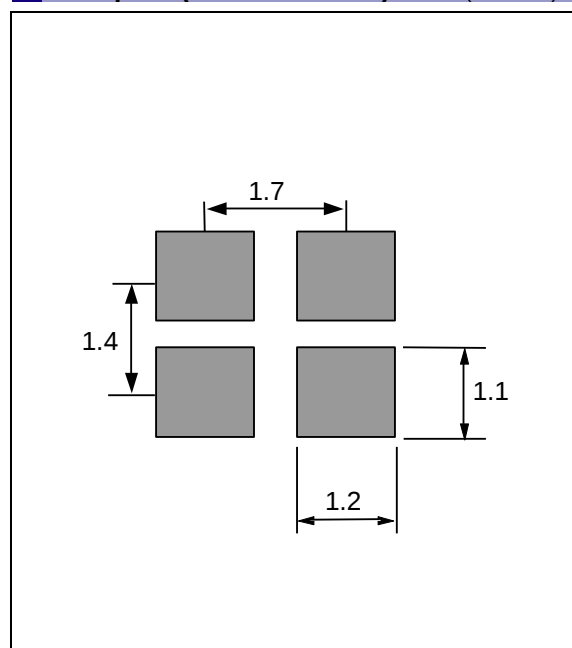
External dimensions

(Unit:mm)



Footprint (Recommended)

(Unit:mm)



Mouser Electronics

Authorized Distributor

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Epson:

[FA-20H 12.0000MB30Z-W](#) [FA-20H 16.0000MF12V-AJ3](#) [FA-20H 16.0000MF12Z-AC0](#) [FA-20H 24.0000MA14R-K](#) [FA-20H 24.0000MB50U-G](#) [FA-20H 24.0000MF15Y-W](#) [FA-20H 25.0000MD30V-C](#) [FA-20H 25.0000MD30Y-C5](#) [FA-20H 25.0000MD30Z-C](#) [FA-20H 26.0000MF10Z-AC3](#) [FA-20H 26.0000MF12V-W](#) [FA-20H 26.5626MA20X-K0](#) [FA-20H 27.1200MA10V-C3](#) [FA-20H 30.0000MF20X-W0](#) [FA-20H 38.4000MF10Z-AS3](#) [FA-20H 40.0000MF15Z-AC3](#) [FA-20H 26.0000ML81Z-AC3](#) [FA-20H 20.0000ML81Z-AC3](#)