

## MHz RANGE CRYSTAL UNIT

## **FA-20H**

Nominal frequency range
 External dimensions
 12 MHz to 54 MHz
 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		0
		For RF Reference	For Clock	Conditions / Remarks
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 (+105 °C)		Please contact us about +85 C < T_use
Level of drive	DL	100 μW Max.	200 μW Max.	Recommended: 1 µW to 100 µW
Frequency tolerance	f_tol	±10 × 10 <sup>-6</sup>	±30 × 10 <sup>-6</sup>	+25 C Please contact us for inquiries.
Frequency versus temperature characteristics	f_tem	$\pm 10\times 10^{\text{-}6}$	±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_age	$\pm 1 \times 10^{-6}$ to $\pm 3 \times 10^{-6}$ / year Max. *1		+25 C, First year

<sup>\*1</sup> 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.	
$16.0 \text{ MHz} \le f_{nom} \le 25.0 \text{ MHz}$	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 O Max	

Product name (Standard form) Model 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.



