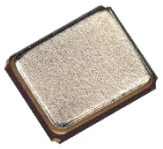
MHz RANGE CRYSTAL UNIT

FA-128

Product Number
Q22FA1280xxxx18

- Nominal frequency range : 19.2 MHz to 54 MHz
- External dimensions : 2.0 × 1.6 × 0.5 mm
- Overtone order : Fundamental
- Applications : Mobile phone, Bluetooth, W-LAN ISM band radio, Clock for MPU



Specifications (characteristics)

Item	Symbol	Specifications	Conditions / Remarks
Nominal frequency range	f_nom	19.2 MHz to 54 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 +105 °C (+125 °C)	Please contact us about +105 °C < T_use
Level of drive	DL	200 μW Max.	Recommended: 10 μW
Frequency tolerance (standard)	f_tol	±10 × 10^{-6}	+25 °C, Please contact us for requirements not listed in this specification.
Frequency versus temperature characteristics. (standard)	f_tem	±12 × 10^{-6} / -20 °C to +75 °C	Please contact us for requirements not listed in this specification.
		±17 × 10^{-6} / -30 °C to +85 °C	
		±20 × 10^{-6} / -40 °C to +85 °C	
		±30 × 10^{-6} / -40 °C to +105 °C	
Load capacitance	CL	6 pF to ∞	Please specify.
Motional resistance (ESR)	R1	As per below Table 1.	
Frequency aging	f_age	±1 × 10^{-6} / year Max. (19.2 MHz ≤ f_nom ≤ 40 MHz)	+25 °C, First year
		±2 × 10^{-6} / year Max. (40 MHz < f_nom ≤ 54 MHz)	

Table 1. Motional resistance (ESR) R1

Frequency	Motional resistance
19.2 MHz ≤ f_nom < 20 MHz	150 Ω Max.
20 MHz ≤ f_nom < 26 MHz	80 Ω Max.
26 MHz ≤ f_nom ≤ 54 MHz	60 Ω Max.

Product name

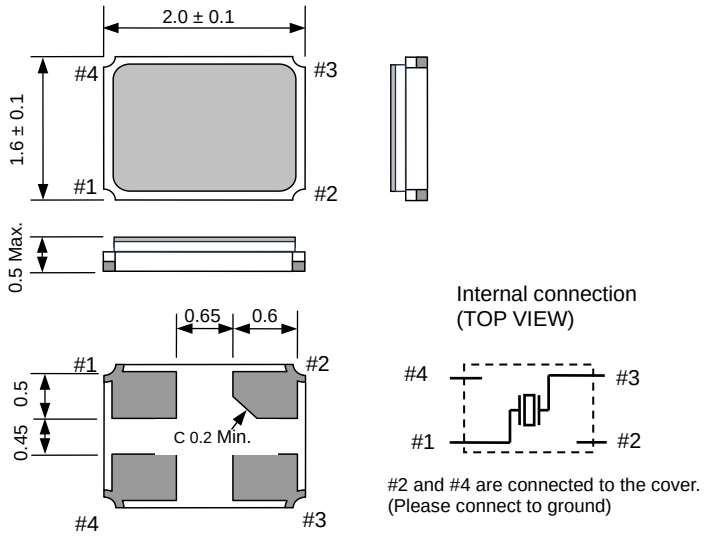
Product name (Standard form)

FA-128 ① 24.000000MHz ② 12.0 ③ +10.0-10.0 ④

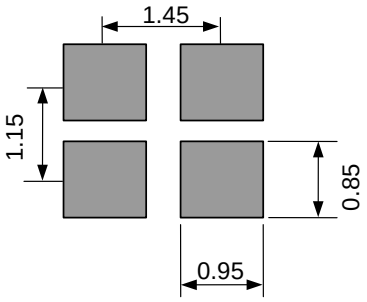
①Model ②Frequency ③Load capacitance(pF) ④Frequency tolerance(× 10^{-6}, +25 °C)

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)



►Explanation of the mark that are using it for the catalog

	►Pb free.
	►Complies with EU RoHS directive. *About the products without the Pb-free mark. Contains Pb in products exempted by EU RoHS directive. (Contains Pb in sealing glass, high melting temperature type solder or other.)
	►Designed for automotive general equipment.
	►Designed for automotive applications related to driving and safety.

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