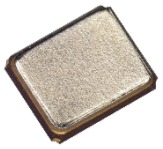
MHz RANGE CRYSTAL UNIT
For Automotive

Product Number
X1E000381Axxx18

FA2016AA



- Nominal frequency range : 19.2 MHz to 80 MHz
- External dimensions : 2.0 × 1.6 × 0.5 mm
- Overtone order : Fundamental
- Applications : Car audio, Vehicle camera system, Car navigation system, ECU clock, Clock, Meter, Electronic key system, etc.
- AEC-Q200 compliant

Specifications (characteristics)

Item	Symbol	Specifications For Automotive	Conditions / Remarks
Nominal frequency range	f_nom	19.2 MHz to 80 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 +125 °C	
Level of drive	DL	200 μW Max.	Recommended: 1 μW to 100 μW
Frequency tolerance	f_tol	±10 × 10^{-6}	+25 °C Please contact us for requirements not listed in this specifications.
Frequency versus temperature characteristics	f_tem	±20 × 10^{-6} / -40 °C to +85 °C ±50 × 10^{-6} / -40 °C to +125 °C	Please contact us for requirements not listed in this specifications.
Load capacitance	CL	6 pF to ∞	Please specify.
Motional resistance (ESR)	R1	As per below table1.	-40 °C to +125 °C, DL=100 μW
Frequency aging	f_age	±3 × 10^{-6} / year Max.	+25 °C, First year

Table 1. Motional resistance (ESR) R1

Frequency	Motional resistance
19.2 MHz ≤ f_nom < 20 MHz	150 Ω Max.
20 MHz ≤ f_nom < 24 MHz	100 Ω Max.
24 MHz ≤ f_nom < 26 MHz	80 Ω Max.
26 MHz ≤ f_nom ≤ 80 MHz	60 Ω Max.

Product name

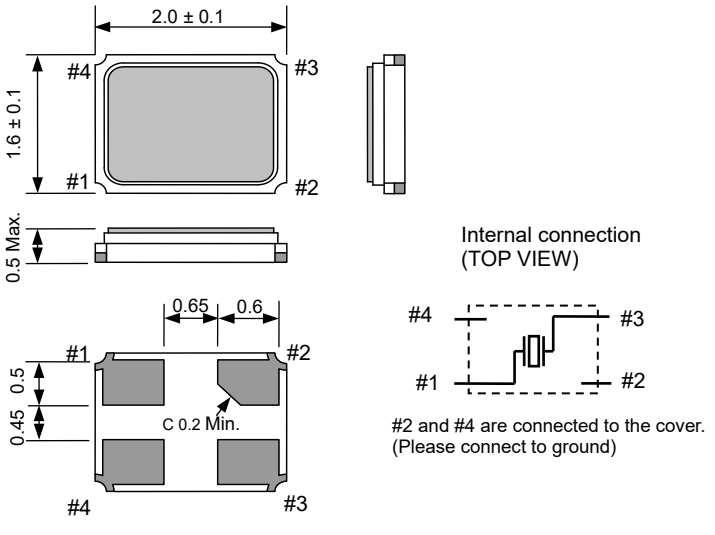
Product name (Standard form)

FA2016AA ① 24.000000MHz ② 12.0 ③ +10.0-10.0 ④

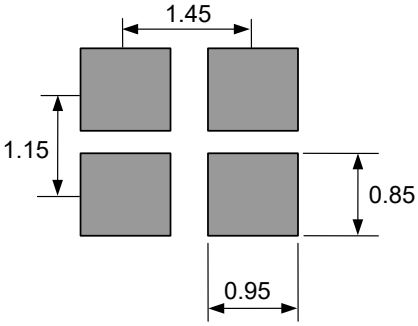
①Model ②Frequency ③Load capacitance(pF) ④Frequency tolerance(× 10^{-6}, +25 °C)

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)



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►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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