



KHz RANGE CRYSTAL UNIT

LOW PROFILE SMD

FC - 13F / FC - 135 / FC - 255

- Frequency range : 32.768 kHz (32 kHz to 100 kHz)
- External dimensions : 3.2 × 1.5 × 0.55 mm ...FC-13F
: 3.2 × 1.5 × 0.80 mm ...FC-135
: 4.9 × 1.8 × 0.80 mm ...FC-255
- Overtone order : Fundamental
- Applications : Small communications devices

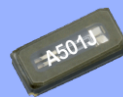


Product Number (please contact us)

FC-13F : Q13FC13F0xxxx00

FC-135 : Q1xFC1350xxxx00

FC-255 : Q1xFC2550xxxx00



Actual size

FC-13F/ 135

FC-255

A501J

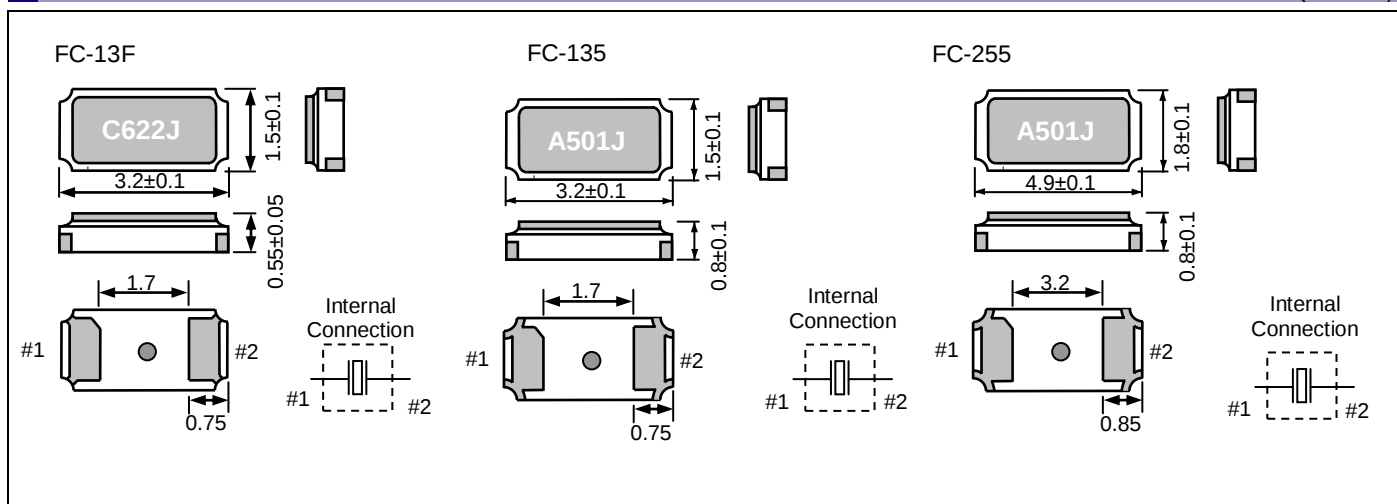
A501J

Specifications (characteristics)

Item	Symbol	Specifications					Conditions / Remarks
		FC-13F	FC-135	FC-135	FC-255	FC-255	
Nominal frequency range	f_nom	32.768 kHz		32 kHz to 77.5 kHz	32.768 kHz	32 kHz to 100 kHz	Please contact us for inquiries regarding available frequencies.
Storage temperature	T_stg	-55 °C to +125 °C					Store as bare product.
Operating temperature	T_use	-40 °C to +85 °C					
Level of drive	DL	0.5 μW Max.					
Frequency tolerance (standard)	f_tol	±20 × 10 ⁻⁶					+25 °C, DL=0.1 μW Please ask for tighter tolerance
Turnover temperature	Ti	+25 °C ±5 °C					
Parabolic coefficient	B	-0.04 × 10 ⁻⁶ / °C ² Max.					
Load capacitance	CL	7 pF, 9 pF, 12.5 pF			7 pF, 12.5 pF		Please specify
Motional resistance (ESR)	R1	80 kΩ Max.	70 kΩ Max.	70 kΩ to 45 kΩ	65 kΩ Max.	70 kΩ to 30 kΩ	
Motional capacitance	C1	3.3 fF Typ.	3.4 fF Typ.	3.7 fF to 1.6 fF	2.0 fF Typ.	2.3 fF to 0.6 fF	
Shunt capacitance	C0	1.0 pF Typ.	1.0 pF Typ.	1.3 pF to 0.5 pF	1.3 pF Typ.	1.7 pF to 0.9 pF	
Frequency aging	f_age	±3 × 10 ⁻⁶ / year Max.					+25 °C, First year

External dimensions

(Unit:mm)



Footprint (Recommended)

(Unit:mm)

