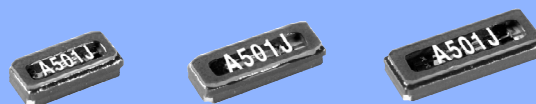


**kHz RANGE CRYSTAL UNIT  
LOW PROFILE SMD**

**FC - 135 / 145 / 255**

- Frequency range : 32.768 kHz (32 kHz to 100 kHz)
- Thickness : 0.8 mm Typ.
- Overtone order : Fundamental
- Applications : Small communications devices
- Lead(Pb)-free : Contains Pb in sealing glass exempted by RoHS directive.



Actual size

FC-135

FC-145

FC-255

A501J

A501J

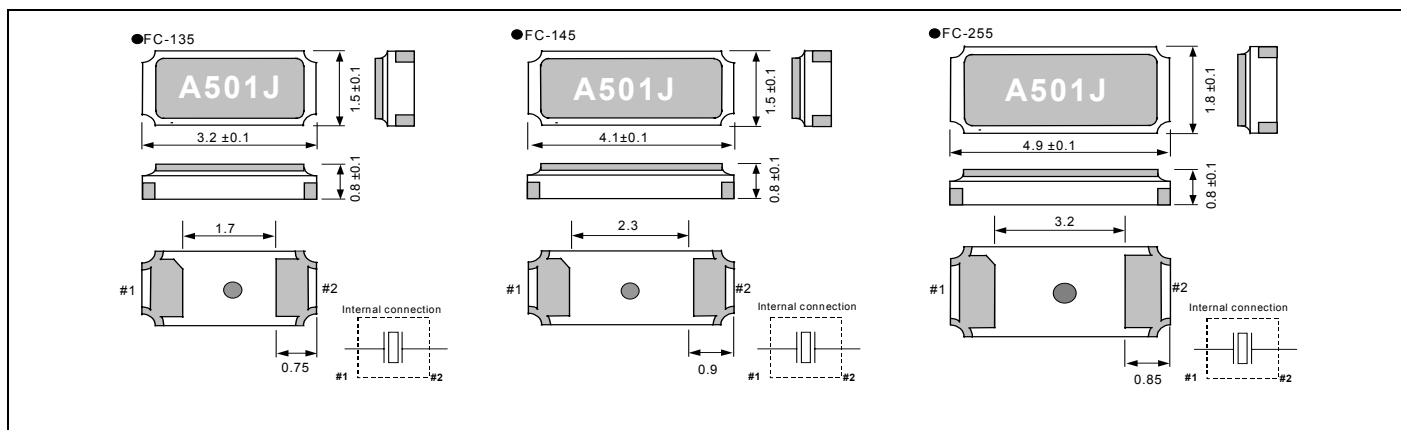
A501J

**Specifications (characteristics)**

Item	Symbol	Specifications				Remarks
		FC-135 / 145	FC-255	FC-135	FC-255	
Nominal frequency range	f	32.768 kHz		32 kHz to 77.5 kHz	32 kHz to 100 kHz	please contact us for inquiries Regarding available frequencies.
Temperature range	Storage temperature T_stg	-55 °C to +125 °C				Stored as bare product after unpacking
	Operating temperature T_use	-40 °C to +85 °C				
Level of drive	DL	0.5 μW Max.				
Frequency tolerance (standard)	f_tol	±20 × 10 <sup>-6</sup>		±50 × 10 <sup>-6</sup>	±100 × 10 <sup>-6</sup>	+25 °C, DL=0.1 μW Please ask tighter tolerance
Turnover temperature	Ti	+25 °C ±5 °C				
Parabolic coefficient	B	-0.04 × 10 <sup>-6</sup> / °C <sup>2</sup> Max.				
Load capacitance	CL	9 pF, 12.5 pF	7 pF, 12.5 pF	9 pF, 12.5 pF	7 pF, 12.5 pF	Please specify
Motional resistance (ESR)	R <sub>1</sub>	70 kΩ Max.	65 kΩ Max.	70 kΩ to 45 kΩ	70 kΩ to 30 kΩ	
Motional capacitance	C <sub>1</sub>	3.4 fF Typ.	2.0 fF Typ.	3.7 fF to 1.6 fF	2.3 fF to 0.6 fF	
Shunt capacitance	C <sub>0</sub>	1.0 pF Typ.	1.3 pF Typ.	1.3 pF to 0.5 pF	1.7 pF to 0.9 pF	
Frequency aging	f_age	±3 × 10 <sup>-6</sup> / year Max.				+25 °C, First year

**External dimensions**

(Unit:mm)



**Footprint (Recommended)**

(Unit:mm)

