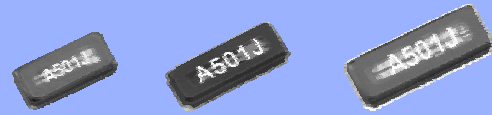




## KHz RANGE CRYSTAL UNIT LOW PROFILE SMD

# FC-135 / FC-145 FC-255

- Frequency range : 32.768 kHz (32 kHz to 100 kHz)
- Thickness : 0.9 mm Max.
- Overtone order : Fundamental
- Applications : Small communications devices



Actual size

FC-135

FC-145

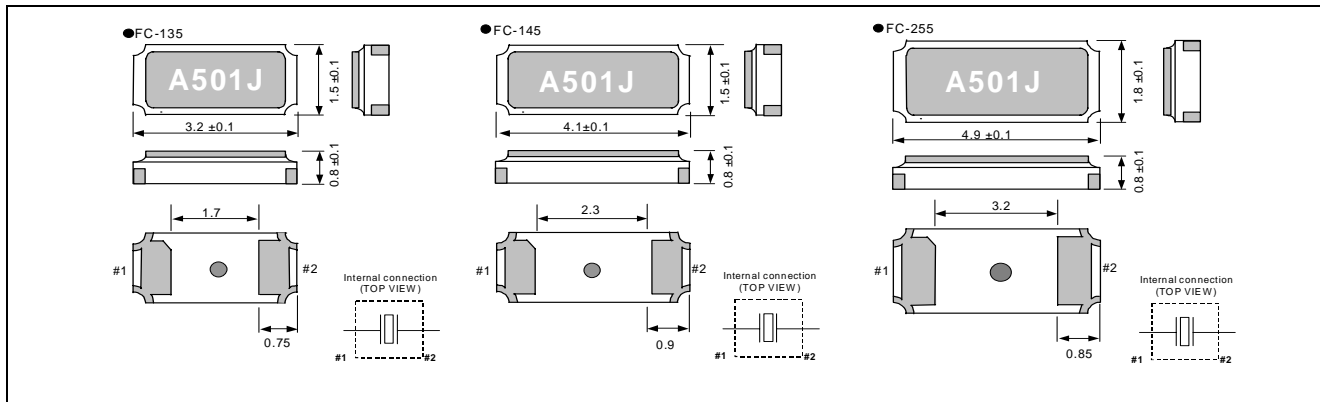
FC-255

### 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 <sub>stg</sub>	-55 °C to +125 °C				Store as bare product after unpacking
	Operating temperature T <sub>use</sub>	-40 °C to +85 °C				
Level of drive	DL	0.5 μW Max.				
Frequency tolerance (standard)	f <sub>tol</sub>	±20 × 10 <sup>-6</sup>				+25 °C, DL=0.1 μW Please ask tighter for tolerance
Turnover temperature	T <sub>i</sub>	+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 <sub>age</sub>	±3 × 10 <sup>-6</sup> / year Max.				+25 °C, First year

### External dimensions

(Unit:mm)



### Footprint (Recommended)

(Unit:mm)

