

kHz RANGE CRYSTAL UNIT



Product Number (please contact us)

FC-135R : X1A000141xxxx00

FC-135 : Q1xFC1350xxxx00

FC-255 : Q1xFC2550xxxx00

FC-135R NEW

FC-135/FC-255

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



Actual size

FC-135R/FC-135

FC-255

Specifications (characteristics)

Item	Symbol	Specifications					Conditions / Remarks
		FC-135R	FC-135		FC-255		
Nominal frequency range	f_nom	32.768 kHz	32.768 kHz	32 kHz to 77.5 kHz	32.768 kHz	32 kHz to 100 kHz	Please contact us about available frequencies.
Storage temperature	T_stg	-55 °C to +125 °C					Storage as single product.
Operating temperature	T_use	-40 °C to +85 °C					
Level of drive	DL	0.5 μW (1.0 μW Max.)			0.5 μW Max.		Please contact us if you require 1.0μW 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	50 kΩ Max.	70 kΩ Max.	70 kΩ to 45 kΩ	65 kΩ Max.	70 kΩ to 30 kΩ	
Motional capacitance	C1	3.4 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	1.1 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

Product name FC-135R 32.768000kHz 12.5 +20.0-20.0

(Standard form)

①

②

③

④

①Model

②Frequency

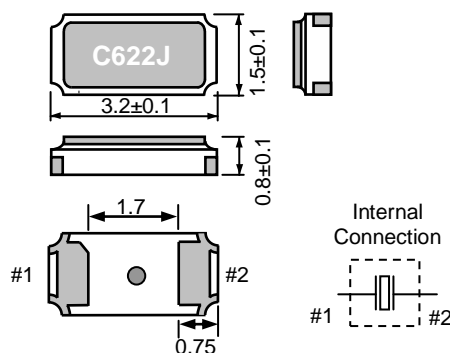
③Load capacitance(pF)

④Frequency tolerance(× 10⁻⁶, +25 °C)

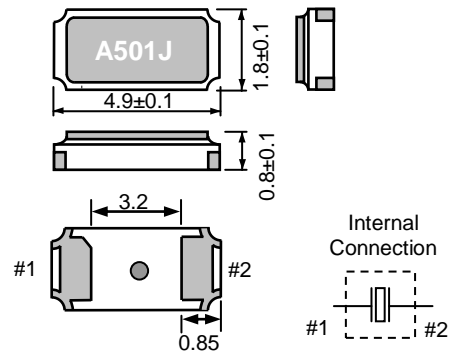
External dimensions

(Unit:mm)

FC-135R / FC135



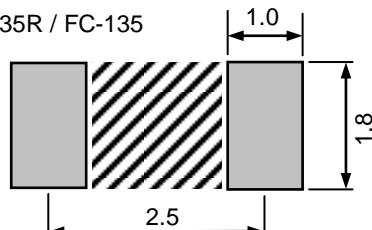
FC-255



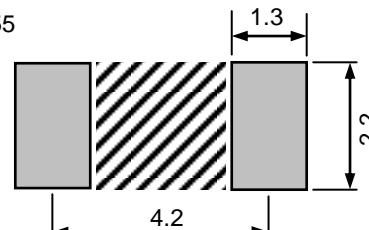
Footprint (Recommended)

(Unit:mm)

FC-135R / FC-135



FC-255



*Do not design any circuit patterns in the shaded area.