

THIN SMD LOW FREQUENCY CRYSTAL UNIT

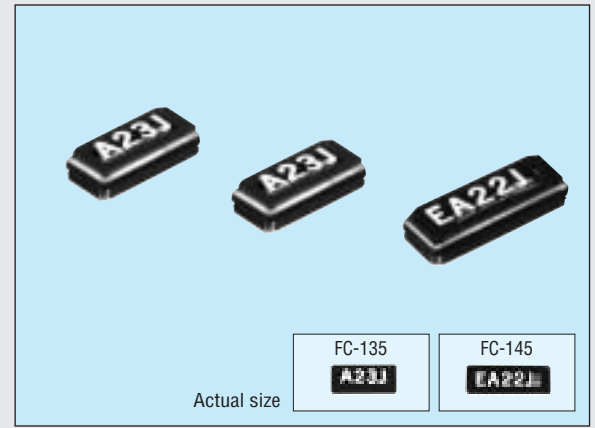
FC-135/145

Product number (please refer to page 1)

Q13FC135xxxxxx00

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- High-density mounting-type SMD of 0.9 mm Max. thickness.
- Small packaging area and light weight.
- Excellent environmental capability.
- Most suitable for small communications devices.

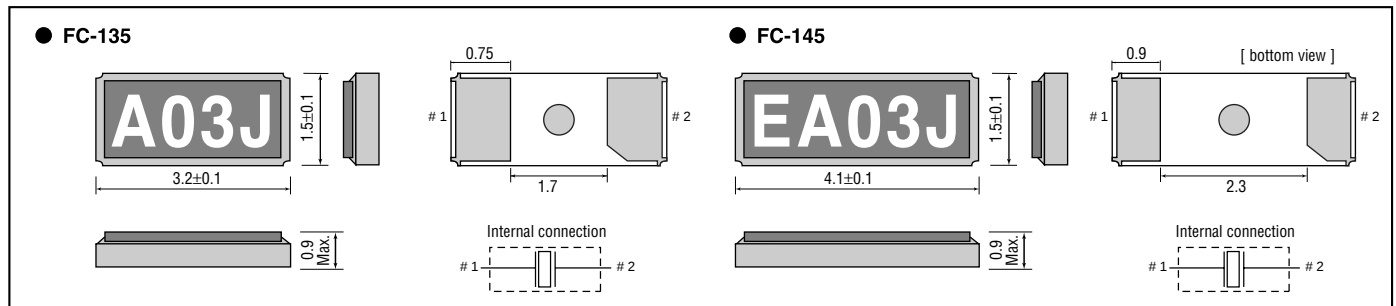


■ Specifications (characteristics)

Item		Symbol	Specifications	Remarks
Nominal frequency		f	32.768 kHz	please contact us for inquiries about the available frequency
Temperature range	Storage temperature	T _{STG}	-55 °C to +125 °C	Stored as bare product after unpacking
	Operating temperature	T _{OPR}	-40 °C to +85 °C	
Maximum drive level		GL	0.5 μW Max.	
Recommended drive level		DL	0.1 μW	
Frequency tolerance(standard)		Δf/f	±20 x 10 ⁻⁶	T _a =+25 °C, DL=0.1 μW Please ask tighter tolerance
Peak temperature(frequency)		θT	+25 °C ±5 °C	
Temperature coefficient(frequency)		a	-0.04 x 10 ⁻⁶ /°C ² Max.	
Load capacitance		C _L	9.0 pF, 12.5 pF	Please specify
Series resistance		R ₁	70 kΩ Max.	
Motional capacitance		C ₁	1.7 fF Typ.	
Shunt capacitance		C ₀	1.3 pF Typ.	
Insulation resistance		IR	500 MΩ Min.	
Aging		fa	±3 x 10 ⁻⁶ /year Max.	T _a =+25 °C ±3 °C, first year
Shock resistance		S.R.	±8 x10 ⁻⁶ Max.	100 g dummy (Seiko Epson Standard) drop from 1500 mm height on to the concrete 3 directions 10 times.

■ External dimensions

(Unit: mm)



■ Recommended soldering pattern

(Unit: mm)

