

THIN SMD LOW/MEDIUM-FREQUENCY CRYSTAL UNIT

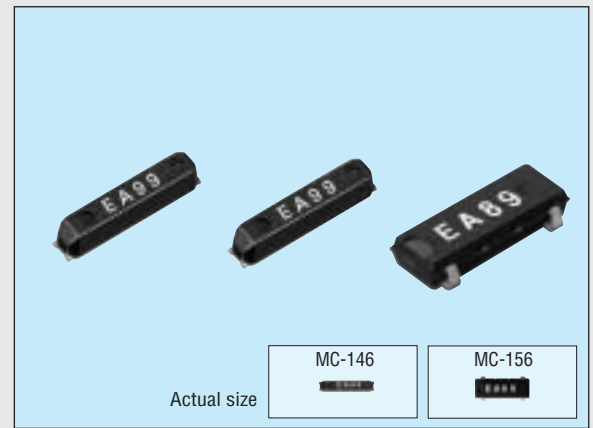
MC-146/156

Product number (please refer to page 1)

Q1xMC146xx xx x00

Q1xMC156xx xx x00

- High-density mounting-type SMD of 1.4 mm thickness.(MC-146)
- Small packaging area and light weight.
- Excellent environmental capability.
- Most suitable for small communications devices.

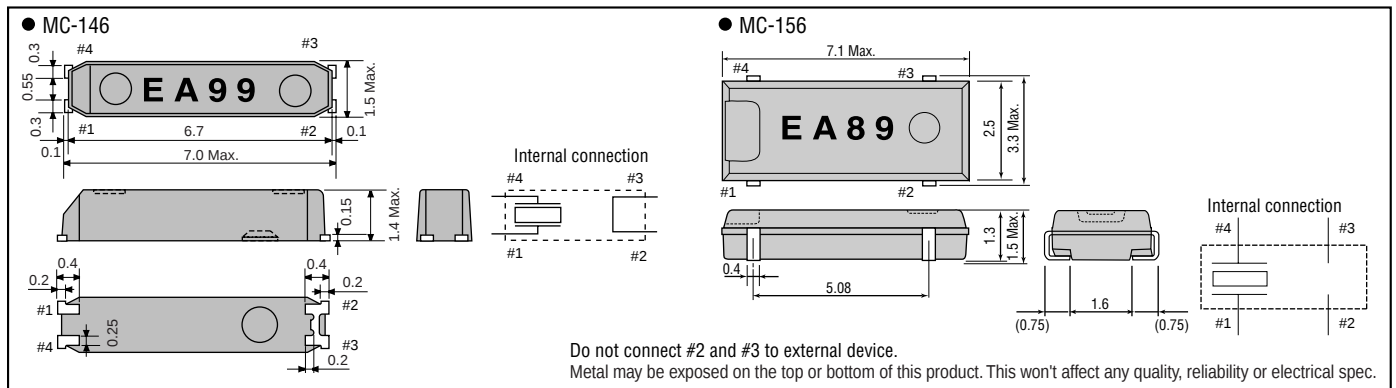


Specifications (characteristics)

Item		Symbol	Specifications		Remarks
Nominal frequency		f	32.768 kHz	32.000 kHz to 100.000 kHz	please contact us for inquiries about the available frequencies
Temperature range	Storage temperature	TSTG	-55 °C to +125 °C		Stored as bare product after unpacking
	Operating temperature	TOPR	-40 °C to +85 °C		
Maximum drive level		GL	1.0 μW Max.		Operating drive level 0.5 μW Max.
Frequency tolerance(standard)		Δf/f	±20 x 10 ⁻⁶ , ±50 x 10 ⁻⁶	±50 x 10 ⁻⁶ , ±100 x 10 ⁻⁶	Ta=+25 °C, DL=0.1 μW
Peak temperature(frequency)		θT	+25 °C ±5 °C		
Temperature coefficient(frequency)		a	-0.04 x 10 ⁻⁶ /°C ² Max.		
Load capacitance		CL	7 pF, 12.5 pF		Please specify
Series resistance		R1	65 kΩ Max.	65 kΩ to 25 kΩ	
Motional capacitance		C1	1.9 fF Typ.	2.5 fF to 0.6 fF	
Shunt capacitance		C0	0.8 pF Typ.	1.2 pF to 0.5 pF	
Insulation resistance		IR	500 MΩ Min.		
Aging		fa	±3 x 10 ⁻⁶ /year Max.		Ta=+25 °C ±3 °C, first year
Shock resistance		S.R.	±5 x 10 ⁻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)

