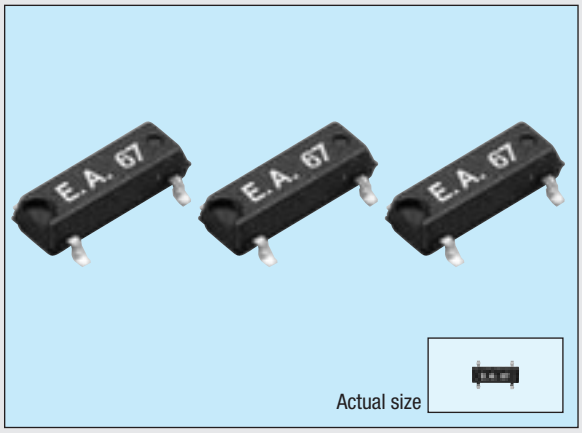
THIN SMD LOW / MEDIUM-FREQUENCY CRYSTAL UNIT

MC-206

Product number (please refer to page 1)

Q1xMC206xxxxx00

- High-density mounting-type SMD of Max. 2.0 mm thickness.
- High heat resistance allows reflow soldering.
- Excellent environmental capability.
- Available for lead (Pb)-free soldering.
- Available for lead (Pb)-free terminal.



■ Specifications (characteristics)

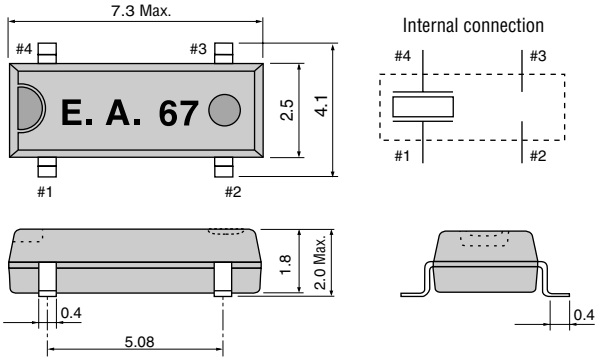
Item		Symbol	Specifications		Remarks
Nominal frequency range		f	32.768 kHz	32.000 kHz to 100.000 kHz	please contact us for inquiries about the available frequency
Temperature range	Storage temperature	TSTG	-55 ˚C to +125 ˚C		Stored as bare product after unpacking
	Operating temperature	TOPR	-40 ˚C to +85 ˚C		
Maximum drive level		GL	1.0 µW Max.		
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}/˚C² Max.		
Load capacitance		CL	7 pF, 12.5 pF		Please specify
Series resistance		R1	55 kΩ Max.	50 kΩ to 20 kΩ	As per below table
Motional capacitance		C1	1.8 fF Typ.	3.0 fF	
Shunt capacitance		C0	0.9 pF Typ.	1.5 pF	
Insulation resistance		IR	500 MΩ Min.		
Aging		fa	±3 x 10^{-6} / year Max.	±5 x 10^{-6} / year Max.	Ta = +25 ˚C ±3 ˚C, first year
Shock resistance		S.R.	±5 x 10^{-6} Max.		Three drops on a hard board from 750 mm or excitation test with 29400 m/s² x 0.3 ms x 1/2 sine wave x 3 directions

■ Series resistance

Frequency (kHz)	32 ≤ f < 38	38 ≤ f < 65.536	65.536 ≤ f < 75	75 ≤ f ≤100
Series resistance (Ω)	50 kΩ Max.	40 kΩ Max.	25 kΩ Max.	20 kΩ Max.

■ External dimensions

(Unit: mm)



Do not connect #2 and #3 to external device.
Metal may be exposed on the top or bottom of this product. This won't affect any quality, reliability or electrical spec.

■ Recommended soldering pattern

(Unit: mm)