

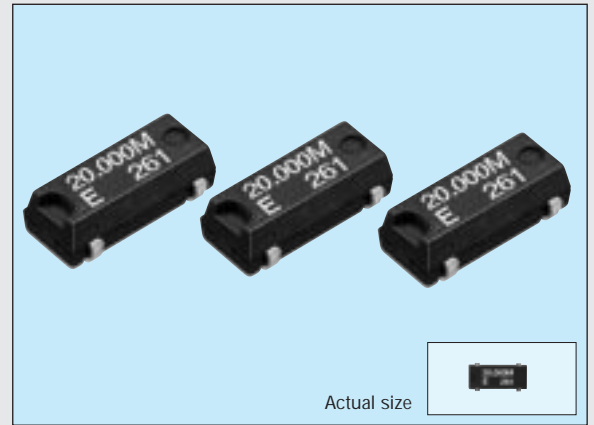
SMALL SMD HIGH - FREQUENCY CRYSTAL UNIT

MA-306

Products number

Q22MA306xx xx x 00

- High-density mounting-type SMD.
- Excellent reliability and environment capability.
- Capable of covering a wide frequency range. (from 17.734 MHz to 41 MHz)



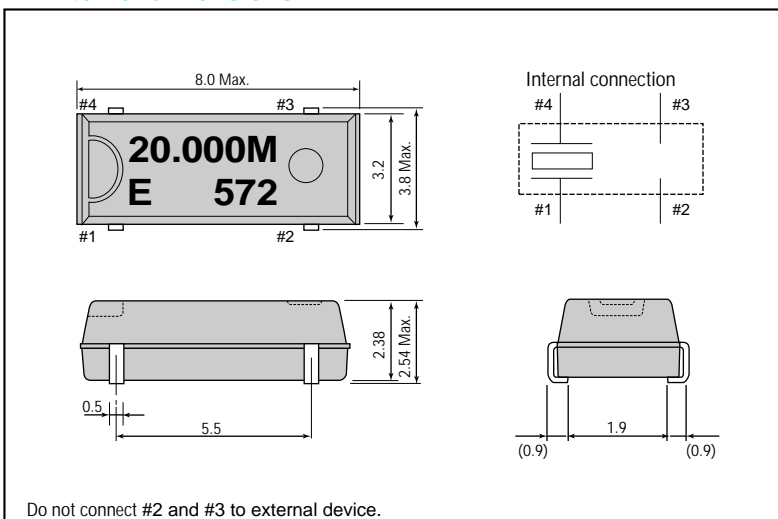
Specifications (characteristics)

Item	Symbol	Specifications	Remarks	
Nominal frequency	f	17.734 MHz to 41.000 MHz	Fundamental mode	
Temperature range	Storage temperature	T _{STG}	-55 °C to +100 °C	Stored as bare product after unpacking
	Operating temperature	T _{OPR}	-20 °C to +70 °C	
Drive level	Maximum drive level	GL	2 mW Max.	Only crystal oscillation is guaranteed
	Recommended drive level	DL	10 μW to 100 μW	
Frequency tolerance (standard)	Δf/f	±50 x 10 ⁻⁶	Ta= +25 °C ±3 °C	
Frequency temperature characteristics (standard)		±30 x 10 ⁻⁶	-20 °C to +70 °C	
Load capacitance	C _L	10 pF to ∞	Please specify	
Series resistance	R ₁	60 Ω Max.	-20 °C to +70 °C, DL=100 μW	
Shunt capacitance	C ₀	5 pF Max.		
Insulation resistance	IR	500 MΩ Min.		
Aging	fa	±5 x 10 ⁻⁶ / year Max.	Ta=+25 °C ±3 °C, first year	
Shock resistance	S.R.	±10 x 10 ⁻⁶ Max.	Three drops on a hard board from 750 mm or excitation test with 29400 m/s ² x 0.3 ms x 1/2 sine wave x 3 directions	

Metal may be exposed on the top of this product. This won't affect any quality, reliability or electrical spec.

External dimensions

(Unit: mm)



Recommended soldering pattern

(Unit: mm)

