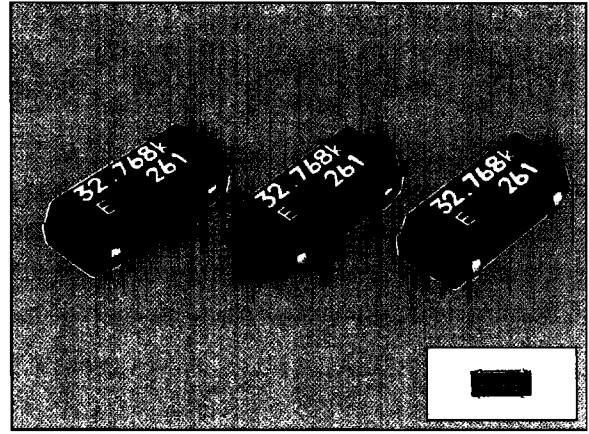


# SMALL SMD LOW/MEDIUM-FREQUENCY QUARTZ CRYSTAL MC-306

- High-density mounting-type SMD.
- Photolithography finish allows uniform and stable performance.
- Excellent reliability and environmental capability.
- 2.54mm thickness is equal to SMD-type IC.



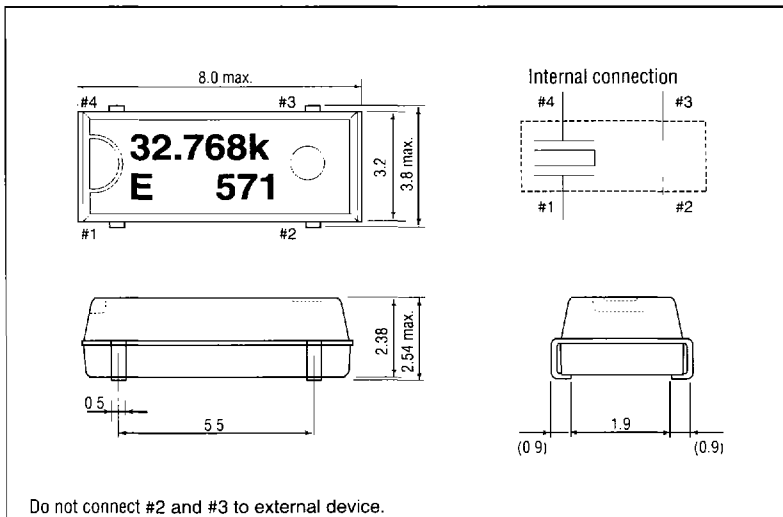
Actual size

## Specifications (characteristics)

Item	Symbol	Specifications		Remarks
Nominal frequency	f	32.768 kHz	20.000 kHz to 165.000 kHz	Please consult us except for 32.768 kHz
Temperature range	Storage temperature	T <sub>STG</sub> -55°C to +125°C		Stored as bare product after unpacking
	Operating temperature	T <sub>OPR</sub> -40°C to +85°C		
Maximum drive level	GL	1.0μW max.		
Soldering condition	T <sub>SOL</sub>	Twice at under 260°C within 10 sec. or under 230°C within 3 min.		
Frequency tolerance (standard)	Δf/f	±20ppm or ±50ppm	±50ppm, ±100ppm	T <sub>a</sub> =25°C, DL=0.1μW
Peak temperature (frequency)	θT	25°C ±5°C		
Temperature coefficient (frequency)	a	-0.04ppm/°C <sup>2</sup> max.		
Load capacitance	CL	6pF to ∞		Please specify
Series resistance	R <sub>1</sub>	50 kΩ max.	55 kΩ to 10 kΩ	
Motional capacitance	C <sub>1</sub>	1.8fF typ.	4.0fF to 0.6fF	
Shunt capacitance	C <sub>0</sub>	0.9pF typ.	2.0pF to 0.6pF	
Insulation resistance	IR	500 MΩ min.		
Aging	fa	±3ppm/Y max.	±5ppm/Y max.	T <sub>a</sub> =25°C ±3°C, first year
Shock resistance	S.R.	±5ppm max.		Three drops on a hard board from 75 cm or excitation test with 3000G x 0.3ms x 1/2 sine wave x 3 directions

## External dimensions

(Unit: mm)



## Recommended soldering pattern

(Unit: mm)

