LOW FREQUENCY CRYSTAL (SURFACE MOUNT TYPE)

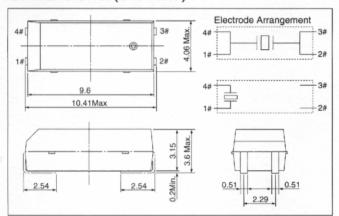
CITIZEN.

CM201/CM202

(2,000pcs/reel)



■DIMENSIONS: (UNIT=mm)



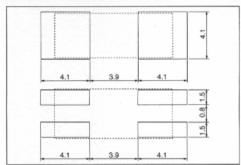
■FEATURES:

- Being of the ultra-miniature SMD type, and thus featuring excellent effeciency in mounting, the CM201S /CM202S is ideal for application to high-density circuit boards.
- As it incorporates a heat-resisting packaged cylinder-type crystal, it features highly stable characteristics-high enough to permit reflow soldering.
- Can be mounted automatically because of the emboss taping used.
- Its low power consumption makes it ideal for application to portable equipment.

APPLICATIONS:

 Permits use as a clock source for communication equipment, AV equipments, OA equipment, camera and measuring instruments.

■ RECOMMENDED SOLDERING PATTERN: (UNIT=mm)



IIISTANDARD SPECIFICATIONS

Item	Model	CM201/CM202	Conditions
Nominal frequency	fo	32.768kHz	
Frequency tolerance	△f/f₀	±20ppm	at 25°C
Frequency vs. Temperature characteristics	△f/f₀	See drawing	-10°C~+60°C
Turnover temperature	Tm	25°C±5°C	
Freq. temp. coefficient	β	-0.034 ±0.006ppm/°C ²	
Operating temperature range	TORP	-40°C~+85°C	
Storage temperature range	Тята	−55°C~+125°C	Store by one unit
Equivalent series resistance	R ₁	50kΩ MAX.	Reference temperature
Load capacitance	CL	12.5pF TYP.	Please specify
Motional capacitance	C ₁	0.003pF TYP.	
Shunt capacitance	Co	1.65pF TYP. (CM201)/1.45pF TYP. (CM202)	
Capacitance ratio	γ	450 TYP.	
Drive level	DL	1μW MAX.	
Insulation resistance	IR	500MΩ MIN.	DC100V±15V
Aging (First year)	△f/f₀	±3ppm MAX.	25°C±3°C
Sealing		1 x 10⁻²µPa⋅m³/s MAX.	
Shock resistance	±5ppm MAX. Drop test of 3 times on a hard board from 75cm height or shock test of 3000G x 0.3ms x 1/2 sin wave x 3 direction		

FREQUENCY vs TEMPERATURE CURVE

