CM130 Preliminary

(3,000pcs/reel)

FEATURES:

- Being of the ultra-miniature SMD type, and thus featuring excellent efficiency in mounting, the CM130 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 as well as high density, cellular phone designs.

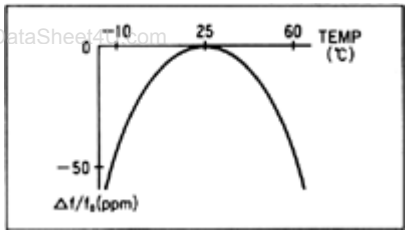
APPLICATIONS:

- Permits use as a clock source for communication equipment, AV equipment, OA equipment, camera, cellular phones, pagers and measuring instruments.

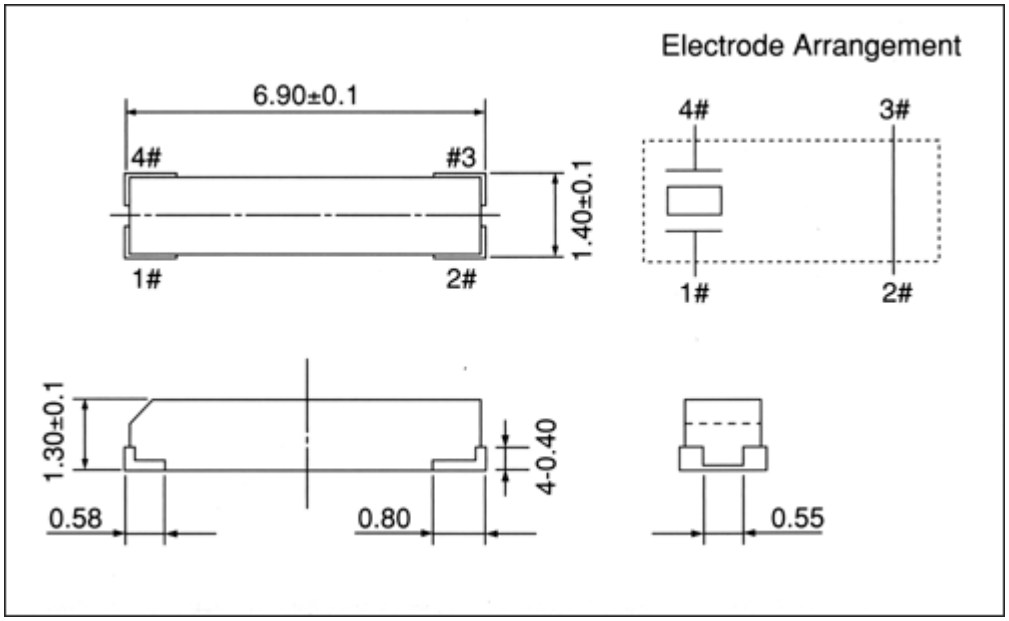
STANDARD SPECIFICATIONS

Item		CM130	Conditions
Nominal frequency	f_0	32.768kHz	
Frequency tolerance	delta f/f_0	± 20ppm	Reference temperature
Frequency vs.Temperature Characteristics	delta f/f_0	See drawing	-10°C to +60°C
Turnover temperature	Tm	25°C ± 5°C	
Freq. temp. coefficient	beta	-0.034 ± 0.006ppm/°C_2	
Operating temperature range	T_{opr}	-40°C to + 85°C	
Storage temperature range	T_{stg}	-55°C to +125°C	
Equivalent series resistance	R_1	65k ohm MAX.	Reference temperature
Load capacitance	C_L	12.5pF TYP.	Please specify
Motional capacitance	C_1	0.0023pF TYP.	
Shunt capacitance	C_0	1.2pF TYP.	
Capacitance ratio	gamma	520 TYP.	
Drive level	DL	1 μ W MAX.	
Insulation resistance	IR	500M ohm MIN.	DC100V ± 15V
Aging (First year)	delta f/f_0	± 3ppm MAX.	25°C ± 3°C
Sealing		1 x 10^{-2} μ Pa·m^3 /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 1/2sin wave x 3 directions		

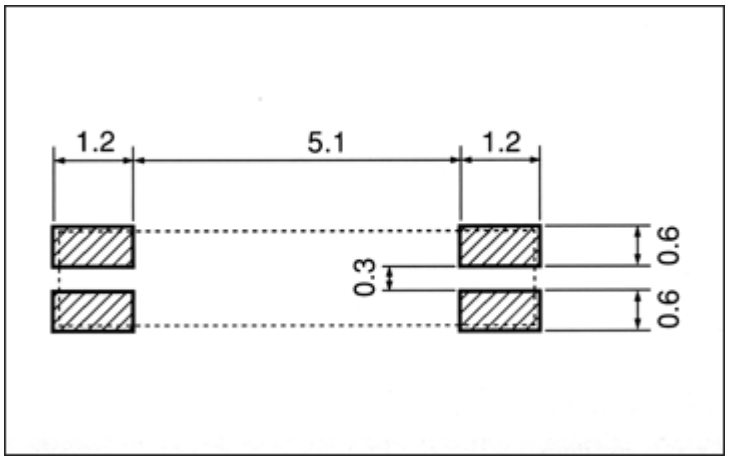
FREQUENCY vs TEMPERATURE CURVE



DIMENSIONS: (UNIT=mm)



RECOMENDED SOLDERING PATTERN: (UNIT=mm)



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