

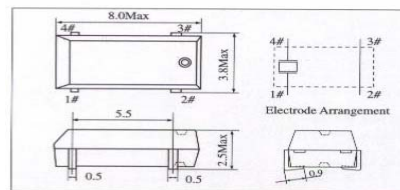
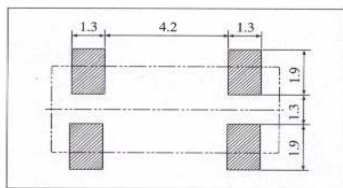
32.768KHz Crystal Units (Plastic Surface Mount Type)

● APPLICATIONS:

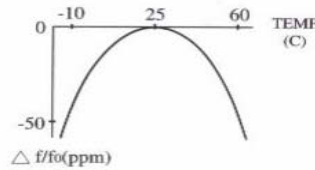
- ▲ Being of the ultra-miniature SMD type ,and thus featuring excellent efficiency in mounting,the CM200S is ideal for application to high-density circuit boards.
- ▲ As it incorporates a heat-resisting packaged cylinder-type crystal,it features Highly stable characteris-tics-high enough to permit reflow soldering
- ▲ Can be mounted automatically because if the emboss taping used.
- ▲ Uts low power consumption makes it ideal for application to portable equipmentt



Dimensions:(mm)



FREQUENCY VS TEMPERATURE CURVE



Electronic Specifications

Partameter	Symb	Units	CMR200S	Condition
Nominal frequency	fo	KHZ	32.768	
Frequency tolerance	$\Delta f/fo$	Ppm	± 20	At 25°C
Frequency vs.temperature characteristics	$\Delta f/fo$		See drawing	-10°C~+60°C
Turnover temperature	Tm	°C	25 ± 5	
Freq.temp.coefficient	β	ppm/(°C) ²	-0.034 ± 0.006	
Operating temperature range	T _{OPR}	°C	-40~+85	
Storage temperature range	T _{STG}	°C	-55~+125	
Equivalent series resistance	R ₁	K Ω	50max	At25°C
Load capacitance	C _L	PF	12.5 TYP	Pkease soecuft
Motional capacitance	C ₁	PF	0.0030TYP	
Shunt capacitance	Co	PF	1.35TYP	
Capacitance ratio	γ		450TYP	
Drive level	DL	μ W	1MAX	
Insulation resistance	IR	M Ω	500MIN	DC100V ± 15V
Aging(first year)	$\Delta f/fo$	ppm	± 3MAX	At25°C ± 3°C
Sealing			$1 \times 10^{-2} \mu Pa \cdot m^3/s$ MAX.	
Shock resistance			± 5ppm MAX,	

Drop test of 3 times on a hard board from 75cm height or shock test or 3000G×0.3ms×1/2 sin wave×3 directions

