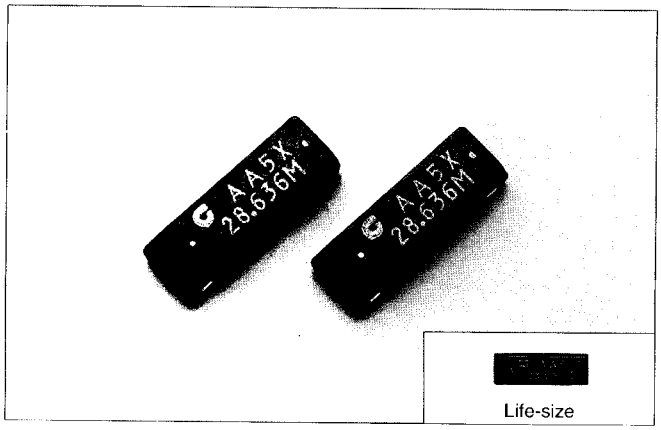
HIGH FREQUENCY CRYSTAL (SURFACE MOUNT TYPE)

CM309S

(1,000pcs/reel)



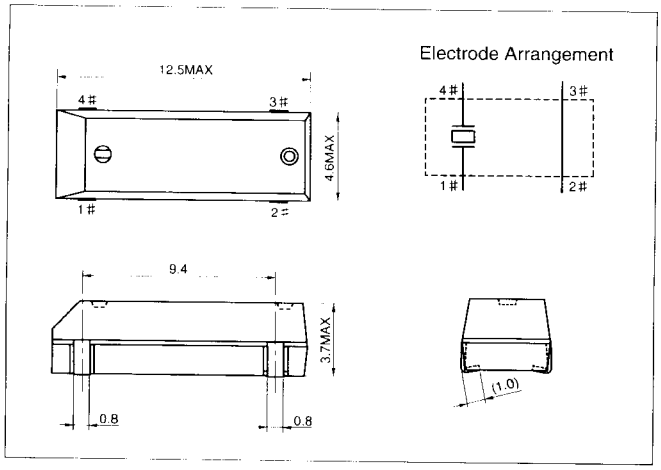
■FEATURES:

- Being of the miniature SMD type and featuring high efficiency in mounting, the CM309S is ideal for application to high-density circuit boards.
- As it incorporates a heat-resisting packaged cylinder-type crystal, this crystal makes best use of the superb characteristic AT-cut crystals have, and permits reflow soldering.
- Enables automatic mounting, due to the adoption of the emboss taping packaging.

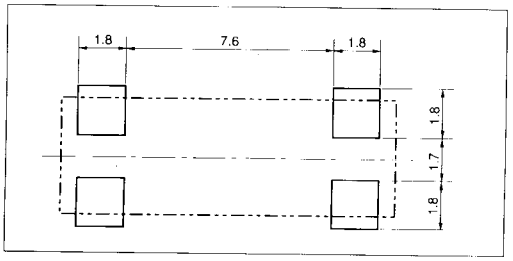
■APPLICATIONS:

- Can be used for a wide range of applications including use in communication equipment, AV equipment, OA equipment and measuring instruments.

■DIMENSIONS: (UNIT=mm)



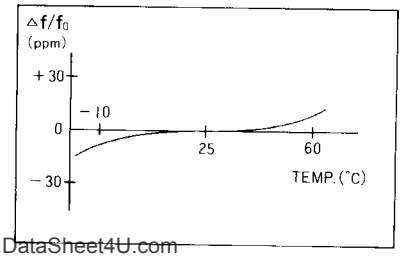
■RECOMMENDED PATTERNING: (UNIT=mm)



■STANDARD SPECIFICATIONS

Item	Model	CM309S	Conditions
Nominal frequency	f_0	3.5MHz~30MHz (fund), 30MHz~70MHz (3rd OT)	Please contact us for changes in frequency.
Frequency tolerance	$\triangle f/f_0$	±30ppm or ±50ppm	Reference temperature
Frequency vs. Temperature characteristics	$\triangle f/f_0$	±30ppm or ±50ppm	−10°C~+60°C
Operating temperature range	T_{ORP}	−40°C~+85°C	
Storage temperature range	T_{STG}	−55°C~+125°C	Store by one unit
Equivalent series resistance	R_1	See drawing	
Load capacitance	C_L	16.0pF TYP.	Please specify
Shunt capacitance	C_0	7.0pF MAX.	
Drive level	DL	50μW~100μW	
Insulation resistance	IR	500MΩ MIN.	DC100V±15V
Aging (First year)	$\triangle f/f_0$	±5ppm MAX.	25°C±3°C
Sealing		1×10^{-2} μPa·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	Conditions will vary depending on the frequency.

FREQUENCY vs TEMPERATURE CURVE



EQUIVALENT SERIES RESISTANCE (ESR, R_1)

Frequency	Equivalent series resistance	Mode
3.5MHz≦f0< 4MHz	200	
4MHz≦f0< 6MHz	150	
6MHz≦f0<10MHz	100	
10MHz≦f0≦30MHz	50	
30MHz<f0<36MHz	100	3rd OT
36MHz≦f0<70MHz	80	

(Ω MAX.)