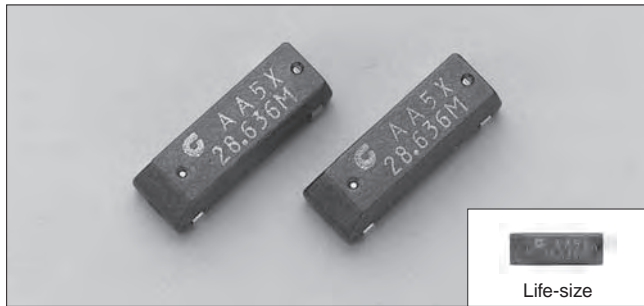


# AT-CUT CRYSTAL UNIT (SMD • Plastic Package)

## CM309S

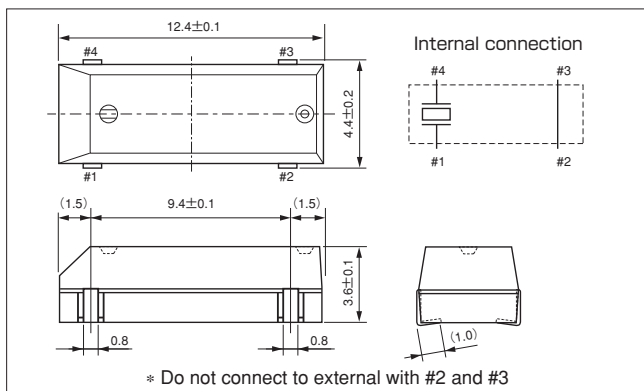
1000pcs/reel



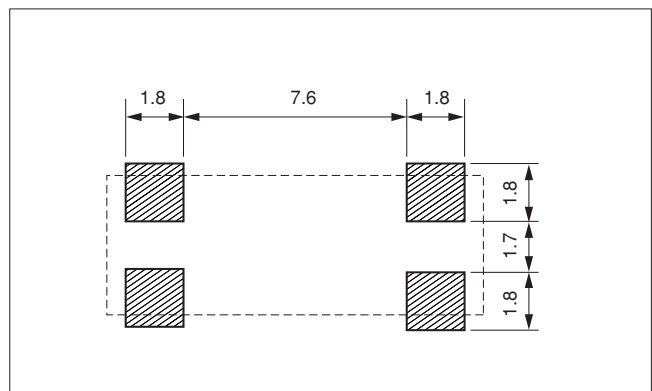
### FEATURES

- Embedded with heat resistant cylinder type crystal bring highly stable characteristics.
- Automatic mounting and reflowable type.
- Suitable for various applications such as communication devices, AV devices, automotive devices and measuring instruments.

### DIMENSION [mm]



### SOLDER PAD LAYOUT [mm]



### STANDARD SPECIFICATIONS

Item	Model	CM309S	Conditions
Nominal Frequency	f <sub>0</sub>	3.5MHz~34.0MHz (Fundamental)	Need to contact us for the available frequency
		27.0MHz~70.0MHz (3rd Overtone)	
Frequency Tolerance	$\Delta f/f_0$	$\pm 30\text{ppm}$	at 25°C
Frequency Tolerance over Operating Temperature Range	$\Delta f/f_0$	below 6.0MHz: $\pm 50\text{ppm}$	-10°C ~ +60°C
		above 6.0MHz: $\pm 30\text{ppm}$	See figure 3 in P4
Operating Temperature Range	T <sub>OPR</sub>	-40°C ~ +85°C	
Storage Temperature Range	T <sub>STR</sub>	-55°C ~ +125°C	
Motional (series) resistance	R <sub>1</sub>	Refer to the following table	at 25°C
Load capacitance	C <sub>L</sub>	16.0pF, 18.0pF	Need to specify your requirement
Shunt capacitance	C <sub>0</sub>	7.0pF Max.	
Level of drive	DL	100 μW	
Insulation Resistance	I <sub>R</sub>	500MΩ Min.	DC100V±15V
Aging (first year)	$\Delta f/f_0$	$\pm 5\text{ppm Max.}$	25°C±3°C

### MOTIONAL (SERIES) RESISTANCE (R<sub>1</sub>)

Frequency Range	3.5MHz ≤ f <sub>0</sub> < 4.0MHz	4.0MHz ≤ f <sub>0</sub> < 6.0MHz	6.0MHz ≤ f <sub>0</sub> < 10MHz	10MHz ≤ f <sub>0</sub> < 27MHz	27MHz ≤ f <sub>0</sub> < 36MHz	36MHz ≤ f <sub>0</sub> ≤ 70MHz
Mode	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental	3rd Overtone
R <sub>1</sub>	200 Ω Max.	150 Ω Max.	100 Ω Max.	50 Ω Max.	50 Ω Max.	100 Ω Max.
						80 Ω Max.

