



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

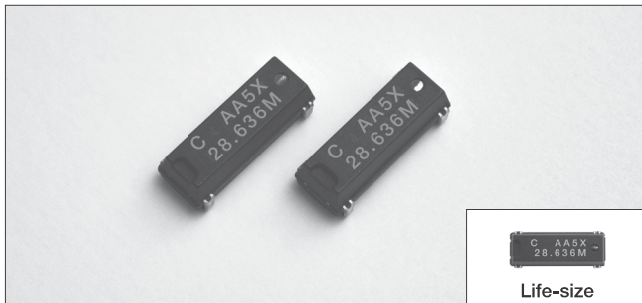


AT-CUT CRYSTAL UNIT (SMD • Plastic Package)

RoHS compliant

CM309E

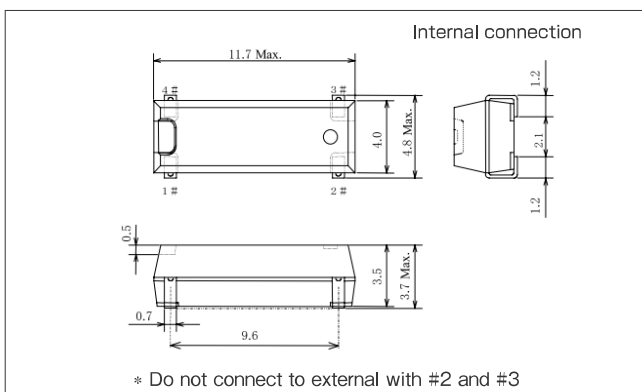
1000pcs/reel



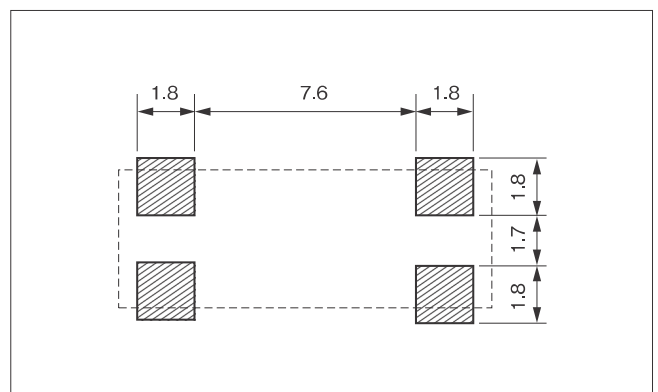
FEATURES

- 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, and measuring instruments.

DIMENSION [mm]



SOLDER PAD LAYOUT [mm]



STANDARD SPECIFICATIONS

Item	Model	CM309E	Conditions
Nominal Frequency	f ₀	4.000MHz~29.999MHz (Fundamental)	Need to contact us for the available frequency
		30.000MHz~64.000MHz (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 5.5MHz: $\pm 50\text{ppm}$	-10°C ~ +60°C See figure 3 in P4
		above 5.5MHz: $\pm 30\text{ppm}$	
Operating Temperature Range	T _{OPR}	-40°C ~ +85°C	
Storage Temperature Range	T _{STR}	-55°C ~ +125°C	
Motional (series) resistance	R ₁	Refer to the following table	at 25°C
Load capacitance	C _L	16.0pF, 18.0pF	Need to specify your requirement
Shunt capacitance	C ₀	5.0pF Max.	
Level of drive	D _L	100 μW	
Insulation Resistance	I _R	500MΩ Min.	DC100V ± 15V
Aging (first year)	$\Delta f/f_0$	$\pm 5\text{ppm Max.}$	25°C ± 3°C

MOTIONAL (SERIES) RESISTANCE (R₁)

Frequency Range	4.0MHz ≤ f ₀ < 5.5MHz	5.5MHz ≤ f ₀ < 6.0MHz	6.0MHz ≤ f ₀ < 10.0MHz	10.0MHz ≤ f ₀ < 12.0MHz	12.0MHz ≤ f ₀ < 16.0MHz	16.0MHz ≤ f ₀ < 30.0MHz	30.0MHz ≤ f ₀ < 36.0MHz	36.0MHz ≤ f ₀ < 64.0MHz
Mode	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental	3rd Overtone	3rd Overtone
R ₁	150Ω Max.	100Ω Max.	80Ω Max.	60Ω Max.	50Ω Max.	40Ω Max.	100Ω Max.	80Ω Max.