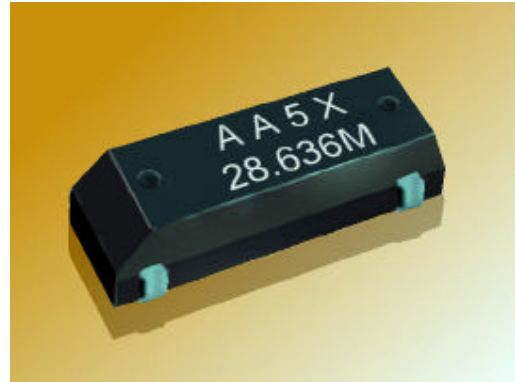


# ECM Surface Mount Crystal

## CM309S Series

- Molded Plastic Package
- Heat Resisting Internal Crystal
- Small Footprint for High Density
- Tape & Reel or Bulk Packaging
- Excellent Heat & Environmental Characteristics



Parameter	Symb	Min	Max	Unit	Note
Frequency Range		3.50	30.00	MHz	Fundamental
		30.001	70.00	MHz	3 <sup>rd</sup> Overtone
Operating Temperature	T <sub>OPR</sub>	-40	+85	°C	
Storage Temperature	T <sub>STG</sub>	-55	+125	°C	
Calibration Tolerance	$\Delta f/f_0$	±30 or ±50		ppm	@ 25 °C
Temperature Tolerance		±30 or ±50		ppm	-10°C to +60°C
Load Capacitance	C <sub>L</sub>	Fundamental 10pF to ∞			
Equivalent Series Resistance	R <sub>1</sub>	50	200	Ω	Frequency dependent
Drive Level	DL	50	100	uW	
Shunt Capacitance	C <sub>0</sub>	7pF max			
Insulation Resistance	IR	500MΩ min			DC100V ±15V
Aging	f <sub>a</sub>	±5ppm / year max.			
Shock Resistance	S.R.	±5ppm max			3 x Drop from 75cm Or excitation test with 3000g x 0.3ms x ½ sine wave x 3 planes

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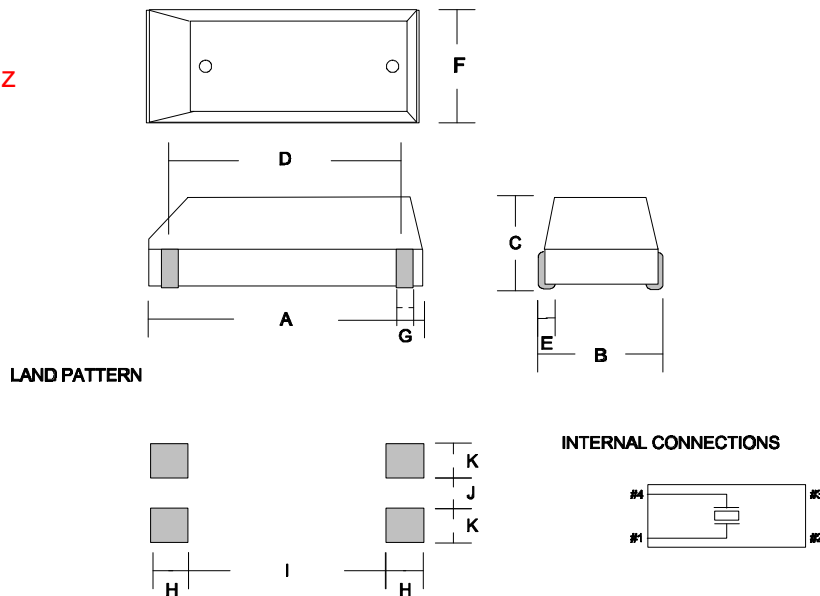
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## CM309S Series

### Standard Frequencies

- ★ 3.6864MHz
- ★ 4.00MHz
- ★ 8.00MHz
- ★ 11.0592MHz
- ★ 12.00MHz
- ★ 14.31818MHz
- ★ 14.7456MHz
- ★ 16.00MHz
- ★ 20.00MHz
- ★ 22.1184MHz



Dimensions in mm

A	B	C	D	E	F	G	H	I	J	K
12.50	4.60	3.70	9.40	1.00	4.60	0.8	1.80	7.60	1.70	1.80

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