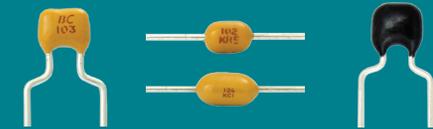




THE VISHAY ADVANTAGE AND WHY IT MATTERS... AUTOMOTIVE APPLICATIONS

Leaded Multilayer Ceramic Capacitors (MLCCs) for Improved Performance Against Mechanical Stress



Product Family	Advantage	Why it Matters (Benefit to the Engineer)	Where Should it Be Considered	Best Parameter / Example
A...R series	Robust against mechanical stress	Leaded MLCCs effectively absorb stress caused by deflection or vibration of the PCB and prevent cracking	In applications in which the PCB is affected by mechanical stress	Available with axial and radial leads and several lead designs
K...R series	Lower buzzing noise	AC voltage applied to MLCCs causes vibration along with an audible buzzing noise. Leaded MLCCs reduce the effect of vibration	When AC voltage is applied to the MLCC	
K...H series				

Other Customer Benefits	How is This Achieved?	Example Device / Details	Comments
High operating temperature	Due to the use of a special epoxy coating and superior Vitramon chips	Operating temperature range of K...H series from -55 °C to +175 °C	It has been approved for 200 °C for a maximum of 500 hours
May be welded directly onto lead frames or cable harnesses	There are lead wires soldered onto the terminations of the MLCC	Available with straight or flat bend leads and lead spaces of 2.5 mm or 5.0 mm	May be overmolded with plastic
AEC-Q200 qualified	Using superior Vitramon chips exceeding AEC-Q200 requirements	Vishay's high temperature operating life test conditions are approx. 500 times more demanding than those of AEC-Q200 standard	K...H series had been tested at a rated temperature of 175 °C instead of specified at 125 °C