

The Harris family of surface-mounted components embraces a wide variety of ratings, package types and end-use applications. They may be loosely divided into two major types — power management and protective devices.

The ML and MLE SERIES of multilayer transient surge suppressors are leadless ceramic devices, often specified as replacements for larger zener diodes, and applied as on-board transient voltage protectors for ICs and transistors. These devices

also suppress those transients defined by the IEEE and IEC for electro magnetic capability. For example, the MLE Series is rated for ESD to the IEC-1000-4-2 specification. These devices, like the AUML series, operate over -55° to +125°C without derating.

**TRANSIENT VOLTAGE SUPPRESSION DEVICES**  
**AUML, ML and MLE Series**

<b>VOLTAGE RATINGS</b>			
<b>Continuous V<sub>m</sub>(AC)</b>	<b>V<sub>n</sub>(DC) V<sub>m</sub>(DC)</b>	<b>V<sub>n</sub>(DC) MIN</b>	<b>V<sub>n</sub>(DC) MAX</b>
2.5	3.5	3.7	7 / 9.3
2.5	3.5	3.7	7 / 9.3
2.5	3.5	3.7	7 / 9.3
4	5.5	7.1	9.3
4.0	5.5	7.1	9.3
4	5.5	7.1	9.3
6.5	9.0	11.0	16
10	14	15.9	20.3
10	14	15.9	20.3
10	14	15.9	20.3
—	16	23	32
14	18	22	28
14	18	22	28
14	18	22	28
20	26	29.5	38.5
26	33	38	45
30	42	46	56
40	56	61	76
50	68	76	90

<b>AUML, ML AND MLE SERIES</b>					
<b>0603 SIZE</b>	<b>0805 SIZE</b>	<b>1206 SIZE</b>	<b>1210 SIZE</b>	<b>1812 SIZE</b>	<b>2220 SIZE</b>
		V3.5MLA1206			
V3.5MLA0603					
	V3.5MLA0805 V3.5MLA0805L				
		V5.5MLA1206			
V5.5MLA0603					
	V5.5MLA0805 V5.5MLA0805L				
V9MLA0603					
		V14MLA1206			
V14MLA0603					
	V14MLA0805 V14MLA0805L				
			V18AUMLA1210	V18AUMLA1812	V18AUMLA2220
		V18MLA1206	V18MLA1210		
V18MLE0603		V18MLE1206			
	V18MLA0805				
	V18MLE0805L	V26MLA1206	V26MLA1210		
		V33MLA1206			
		V42MLA1206			
		V56MLA1206			
		V68MLA1206			

# ATINGS, FUNCTIONS AND APPLICATIONS

The AUML SERIES is designed especially for automotive applications, offering load energy dump ratings as specified per SAE J1113. Rated for a steady-state applied voltage of 16VDC, they are applicable in almost every automotive

subsystem-ignition, braking, restraint devices, wiper motors, etc.

The CH SERIES is a line of metal oxide varistors appropriate for a variety of commercial and industrial applications. Their wide range of steady-state voltage

ratings (14-275VAC 18-369VDC) indicates their unusually broad applicability in hybrid circuits. The low, surface-mount profile allows designers to decrease size and weight of circuit boards while providing electro magnetic compatibility.

## CH Series

V82 - V240 CH Varistors are listed under UL file #E75961 as a recognized component. Series CH Varistors are listed under UL file #E135010 as a recognized component

### MAXIMUM RATINGS (+125°C) CONTINUOUS

MODEL NUMBER	$V_{RMS}$	$V_{DC}$
	$V_{M(AC)}$ (V)	$V_{M(DC)}$ (V)
V22CH8	14	18
V27CH8	17	22
V33CH8	20	26
V39CH8	25	31
V47CH8	30	38
V56CH8	35	45
V120CH8	75	102
V150CH8	95	127
V180CH8	115	153
V200CH8	130	175
V220CH8	140	180
V240CH8	150	200
V360CH8	230	300
V390CH8	250	330
V430CH8	275	369

## Features of the AUML, ML and CH Series

- Bidirectional clamping
- -55 to +125°C Operating Range
- Ceramic construction — no plastic or epoxy
- Wide range of energy dissipation ratings
- Multilayer construction (AUML/ML)
- Wide Voltage Range (ML/CH)
- Rated for load dump and jump start (AUML)
- CH Series Recognized under UL Files E75961 (UL-1449) and E135010 (UL497B)

