

Automotive Applications in Modern Vehicles

Littelfuse AEC-Q200 qualified varistors are specifically developed to protect sensitive automotive systems from voltage transients induced by load dump and other transient events.

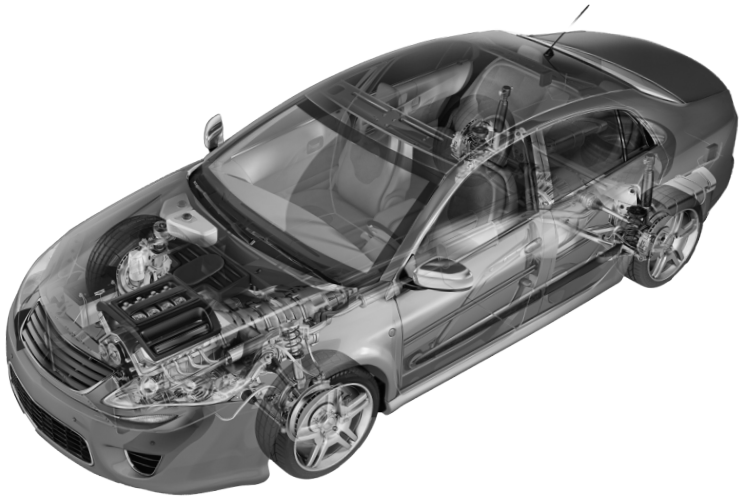
Infotainment & Driver Interface

- Radio
- Power Audio
- Navigation System
- Telematics Box
- Car Multimedia



Safety Electronics

- Air bag
- ABS
- Seat Belt Pretensioning
- Precrash
- Battery Disconnect
- Keyless Entry



Network Systems & Body

- CAN BUS
- LIN BUS
- FlexRay*
- Lighting
- Wiper
- Head Lamp Leveling
- Power Window
- Dashboard
- Climate Control
- Seat Control
- Park Assistance

Powertrain Systems

- Automatic Cruise Control
- Electronic Control Unit (ECU)
- Transmission Control Unit (TCU)
- Battery Charging
- Fuel Injection

Hybrid & Electric Vehicle Products




- Li-ion Polymer
- Ultracapacitors
- Battery Management System (BMS)

* The mark FlexRay is the property of its respective owners.

AEC-Q200-QUALIFIED VARISTOR SELECTION GUIDE

Examples of automotive applications and qualified varistors

Littelfuse offers the most comprehensive Varistor portfolio for Automotive applications

Product Series	Key Applications	Part number	Package Type	DC Voltage	Jump Start Voltage (5 Min)	Load Dump Energy (10 Pulse)	Maximum Non-repetitive Surge Current (8x20µs)	Clamping Voltage	Capacitance (at 1MHz)
				V	VDC	Joules	A	V	pF
AUMOV® Varistor Series	 Mainly used for Motor or Inductive load transients including Body Electronics, Powertrain Systems, Infotainment Systems, Automotive Control Modules, etc.	V05E14AUTO	5mm	14	25	6	400	43	1100
		V07E14AUTO	7mm	14	25	12	800	43	2450
		V10E14AUTO	10mm	14	25	25	1500	43	4650
		V14E14AUTO	14mm	14	25	50	3000	43	10200
		V20E14AUTO	20mm	14	25	100	5000	43	22200
		V05E17AUTO	5mm	17	30	6	400	53	950
		V07E17AUTO	7mm	17	30	12	800	53	2100
		V10E17AUTO	10mm	17	30	25	1500	53	3900
		V14E17AUTO	14mm	17	30	50	3000	53	8700
		V20E17AUTO	20mm	17	30	100	5000	53	18750
		V05E25AUTO	5mm	25	40	6	400	77	750
		V07E25AUTO	7mm	25	40	12	800	77	1500
		V10E25AUTO	10mm	25	40	25	1500	77	2900
		V14E25AUTO	14mm	25	40	50	3000	77	6200
		V20E25AUTO	20mm	25	40	100	5000	77	13500
		V05E30AUTO	5mm	30	45	6	400	93	650
		V07E30AUTO	7mm	30	45	12	800	93	1350
		V10E30AUTO	10mm	30	45	25	1500	93	2550
		V14E30AUTO	14mm	30	45	50	3000	93	5550
		V20E30AUTO	20mm	30	45	100	5000	93	12000
V05E42AUTO	5mm	45	55	6	400	135	500		
V07E42AUTO	7mm	45	55	12	800	135	1000		
V10E42AUTO	10mm	45	55	25	1500	135	1850		
V14E42AUTO	14mm	45	55	50	3000	135	4000		
V20E42AUTO	20mm	45	55	100	5000	135	8500		
AUML Varistor Series	 Mainly used for circuit board level suppression of inductive switching or other transient events such as EFT for Body Electronics, Powertrain Systems, Automotive Control Modules, etc.	V18AUMLA1206	1206	18	24.5	1.5	TBD	40	TBD
		V18AUMLA1210	1210	18	24.5	3.0	TBD	40	TBD
		V18AUMLA1812	1812	18	24.5	6.0	TBD	40	TBD
		V18AUMLA2220	2220	18	24.5	25	TBD	40	TBD
		V24AUMLA2220	2220	24	24.5	25	TBD	60	TBD
		V48AUMLA2220	2220	48	24.5	25	TBD	105	TBD
MLA Automotive Varistor Series	 Mainly used for circuit board level suppression of inductive switching or other transient events such as EFT and ESD for Body Electronics, Infotainment Systems, Automotive Control Modules, etc.	V18MLA0603NHAUTO	0603	18	24.5	0.3	30	50	120
		V18MLA0805NHAUTO	0805	18	24.5	1	120	44	520
		V18MLA0805LNHAUTO	0805	18	24.5	0.7	40	44	290
		V18MLA1206NHAUTO	1206	18	24.5	1.5	150	44	1270
		V18MLA1210NHAUTO	1210	18	24.5	3	500	44	2930
		V26MLA0603NHAUTO	0603	26	27.5	0.4	30	60	110
		V26MLA0805NHAUTO	0805	26	27.5	1	100	60	220
		V26MLA0805LNHAUTO	0805	26	27.5	0.7	40	60	190
		V26MLA1206NHAUTO	1206	26	27.5	1.5	150	60	720
		V26MLA1210NHAUTO	1210	26	27.5	3	300	60	1480
		V30MLA0603NHAUTO	0603	30	29	0.4	30	74	90
		V30MLA0805LNHAUTO	0805	30	29	0.7	30	72	130
		V30MLA1210NHAUTO	1210	30	29	3	280	68	900
		V30MLA1210LNHAUTO	1210	30	29	3	220	68	600
		V33MLA1206NHAUTO	1206	33	36	1.5	180	75	500
		V42MLA1206NHAUTO	1206	42	48	1.5	250	92	425
V48MLA1210NHAUTO	1210	48	48	3	220	105	400		

Note: TBD denotes "to be determined"