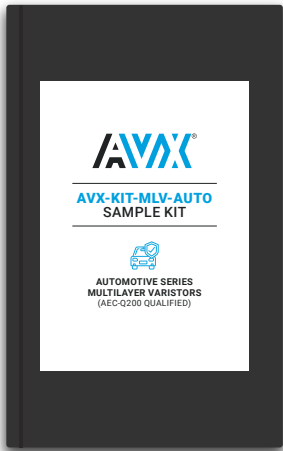


AVX-KIT-MLV-AUTO

Multilayer Varistors Sample Kit – Automotive Applications



GENERAL DESCRIPTION

The AVX line of automotive MLVs represents state-of-the-art overvoltage circuit protection components for automotive applications.

They offer bi-directional overvoltage protection as well as EMI/RFI attenuation in a single SMT package. This allows designers the ability to combine the circuit protection and EMI/ RFI attenuation function into a single highly reliable device.

This AVX sample kit for automotive varistors contains selection of AEC-Q200 qualified components.

HOW TO ORDER

AVX-KIT-MLV-AUTO

Multilayer Varistors
Automotive Sample Kit
AEC-Q200 Qualified
components

PACKAGING

Wallet, minimum ordering quantity 1 pcs

Contains 36 unique part numbers
(5 or 10 pcs of samples per PN - 340 pcs total)



COMPONENT LIST

TransGuard® / Low Clamp TransGuard® Automotive Series

Full range of solutions for bi-directional overvoltage protection as well as EMI/RFI attenuation in a single SMT package. High current and high energy handling capability make them well suited for protection against automotive related transients.

AVX PN	Case	V _w (DC)	V _w (AC)	V _B	V _C	I _{vc}	I _L	E _T	E _{LD}	I _P	Cap	Freq	V _{Jump}	P _{Diss. Max}
	EIA	Vdc	Vac	V	V	A	µA	J	J	A	pF		V	W
VCAS060305A150	0603	5.6	4.0	8.5±20%	18	1	35	0.1	-	30	750	K	-	0.001
VCAS080505A150	0805	5.6	4.0	8.5±20%	18	1	35	0.1	-	40	1100	K	-	0.001
VCAS080505C150	0805	5.6	4.0	8.5±20%	18	1	35	0.3	-	120	3000	K	-	0.005
VCAS060309A200	0603	9	6.4	12.7±15%	22	1	25	0.1	-	30	550	K	-	0.002
VLAS060316A350	0603	16	11	20.5±10%	35	1	10	0.1	-	50	400	K	20	0.003
VGAS181216P390	1812	16	11	24.5±10%	40	5	15	2.9	10	1000	7000	K	27.5	0.07
VGAS222016Y390	2220	16	11	24.5±10%	40	10	15	10.2	45	1500	20000	K	27.5	0.08
VCAS040218X400	0402	18	13	25.5±10%	42	1	10	0.05	0.05	20	65	M	27.5	0.001
VCAS060318A400	0603	18	13	25.5±10%	42	1	10	0.1	0.25	30	150	K	27.5	0.003
VCAS080518C400	0805	18	13	25.5±10%	42	1	10	0.3	1	120	550	K	27.5	0.007
VCAS120618D400	1206	18	13	25.5±10%	42	1	10	0.4	1.5	150	900	K	27.5	0.008
VCAS121018J390	1210	18	13	25.5±10%	42	5	10	1.6	3	500	3100	K	27.5	0.030
VCAS060326A580	0603	26	18	34.5±10%	60	1	10	0.1	0.1	30	155	K	27.5	0.002
VCAS080526C580	0805	26	18	34.5±10%	60	1	10	0.3	0.5	100	250	K	27.5	0.006
VCAS120626F540	1206	26	18	33.0±10%	54	1	15	0.7	1.5	200	600	K	27.5	0.008
VCAS121030H620	1210	30	21	41.0±10%	67	5	10	1.2	3	280	1850	K	30	0.018
VCAS120634N770	1206	34	30	47.0±10%	77	1	15	1.1	1.5	200	400	K	48	0.008
VGAS121034S770	1210	34	30	47.0±10%	77	2.5	15	2	3.0	400	1000	K	48	0.040
VGAS181234U770	1812	34	30	47.0±10%	77	5	15	5	6.1	800	1500	K	48	0.080
VCAS120642K900	1206	42	32	56±10%	90	1	15	0.6		200	260	K	48	0.012

175°C HighTemp TransGuard® Automotive Series

High Temp components for 175°C operation with no derating

AVX PN	Case	V _w (DC)	V _w (AC)	V _B	V _C	I _{vc}	I _L	E _T	E _{LD}	I _P	Cap	Freq	V _{Jump}	P _{Diss. Max}
	EIA	Vdc	Vac	V	V	A	μA	J	J	A	pF		V	W
VTA7080531C650	0805	31	25	39±10%	65	1	10	0.3	1	80	275	K	29	0.006

StaticGuard Automotive Series

Low capacitance version of the TransGuard designed for general ESD protection of CMOS, Bi-Polar, and SiGe based systems. Suitable for use in higher speed data transmission lines and other capacitance sensitive applications.

AVX PN	Case	V _w (DC)	V _w (AC)	V _B	V _C	I _{vc}	I _L	E _T	I _P	Cap	Freq	V _{Jump}	P _{Diss. Max}
	EIA	Vdc	Vac	V	V	A	μA	J	A	pF		V	W
VCAS06LC18X500	0603	18	14	25-40	50	1	10	0.05	30	50	M	27.5	0.001
VCAS08LC18A500	0805	18	14	25-40	50	1	10	0.1	30	80	M	27.5	0.002

Low Capacitance - Communication Bus Automotive Series

Designed for protection of general areas of CAN and FlexRay network. Compared to diodes, these parts have the added advantages of greater current and energy handling capabilities as well as EMI/RFI attenuation.

AVX PN	Case	V _w (DC)	V _w (AC)	V _B	V _C	I _{vc}	I _L	E _T	I _P	Cap	Freq	V _{Jump}	P _{Diss. Max}
	EIA	Vdc	Vac	V	V	A	μA	J	A	pF		V	W
CAN0001	0603	18	14	120	225	1	2	0.015	4	22 Max	M	27.5	0.003
CAN0005	0402	18	14	33	55	1	2	0.05	10	37 Max	M	27.5	0.001
CAN0007	0603	32	25	61	120	1	5	0.05	5	15 Max	M	27.5	0.003
FLX0005	0402	18	14	26	45	1	5	0.02	4	17 Max	M	27.5	0.004

Low Capacitance - sub pF AG / AP / AG Series

Low capacitance varistors for RF circuits, sensors, high-speed data lines and other capacitance sensitive circuits. Low insertion loss, low leakage, unsurpassed reliability compared to diodes.

sub pF AG Series

AVX PN	Case	V _w (DC)	V _B	I _L	Cap	Freq	3db Freq
	EIA	Vdc	V	μA	pF		MHz
VCASH4AG160R8MA	0402	16	125	1	0.8±20%	M	5800

AG Series

AVX PN	Case	V _w (DC)	V _w (AC)	I _L	Cap	Freq
	EIA	Vdc	V	μA	pF	
VCAS04AG183R0YAT	0402	18	14	0.1	3 Max	M
VCAS06AG18120YAT	0603	18	14	0.1	12	M

AP Series

AVX PN	Case	V _w (DC)	V _w (AC)	V _B	V _C	I _{vc}	I _L	E _T	I _P	Cap	Freq	V _{Jump}
	EIA	Vdc	Vac	V	V	A	μA	J	A	pF		V
VCAS04AP181R5DAT	0402	18	13	150-210	350	1	0.1	0.02	1	1.5±0.5	M	48
VCAS06AP243R3LAT	0603	24	17	90-150	240	1	0.1	0.04	3	3.3±0.5	M	48

Multilayer Varistors Sample Kit – Automotive Applications

Miniature MAV Series

Designed for use in low-power AC circuit protection, transient suppression in LC resonant circuits intended for signal & power transfer, and higher DC voltage data lines.

AVX PN	Case	V _w (DC)	V _w (AC)	V _B	V _C	I _{VC}	I _L	E _T	I _P	Cap	Freq
	EIA	Vdc	Vac	V	V	A	μA	J	A	pF	
MAV0010	0603	70	52	120±15%	25	1	10	0.015	2	22 Max	M

Controlled Capacitance Series

A controlled capacitance MLV can greatly improve overall system EMC performance and reduce system size. Developed for use in mixed signal environments with purpose to:

1. Reduce emissions from a high-speed ASIC
2. Prevent induced E fields from conducting into the IC
3. Clamp transient voltages

AVX PN	Case	V _w (DC)	V _w (AC)	V _B	V _C	I _{VC}	I _L	E _T	I _P	Cap	Freq
	EIA	Vdc	Vac	V	V	A	μA	J	A	pF	
VCAC060322A470N	0603	22	17	32.5±25%	50	1	10	0.1	30	47±30%	M
VCAC060326C820M	0603	26	20	36.0±15%	67	1	10	0.3	30	82±20%	M

TransFeed

Combines best TransGuard® and FeedThru filter properties resulting in transient protection with enhanced attenuation characteristics for EMI reduction (narrow band/high attenuation filter).

AVX PN	Case	V _w (DC)	V _w (AC)	V _B	V _C	I _{VC}	I _L	E _T	I _P	Cap	DC res	I _{FT} Max	V _{Jump}
	EIA	Vdc	Vac	V	V	A	μA	J	A	pF	Ohm	A	V
V2AF118A400Y2E	0805	18	13	25.5±15%	42	1	10	0.1	30	200	0.2	0.75	27.5

V _w (DC)	DC Working Voltage [V]	E _{LD}	Load Dump Energy(x10)
V _w (AC)	AC Working Voltage[V]	I _P	Peak Current Rating [A,8x20μS]
V _B	Typical Breakdown Votage [V @ 1mADC]	Cap	Typical capacitance [pF] @ frequency specified and 0.5V _{RMS}
V _C	Clamping Voltage [V @ IVC]	V _{Jump}	Jump Start(V)
I _{VC}	Test Current forVC	P _{Diss.Max}	Power Dissipation(W)
I _L	Maximum leakage current at the working voltage[μA]	DC res	DC resistance (Ohms)
E _T	Transient Energy Rating [J,10x1000μS]	I _{FT}	Maximum feedthru current(A)