



Specifications

Low Capacitance Series

- Typical ESD failure voltage for CMOS and/or Bi Polar is 200V.
- Low capacitance is required for high-speed data transmission.
- 15 kV ESD pulse (air discharge) per IEC 1000-4-2 Level 4, generates < 20mJ of energy.
- Low leakage current is necessary for battery operated equipment.

Part No	Characteristics							
	ITEM	Vw[V]	Vb[V]	Vc[V]	I _r [A] max	Er[J] max	Cp[pF]	
	Test Cond'n	< 20μA	1mA DC	1A 8/20μs	8/20μs	10/1000μs	0.5Vrms	Freq
VAS04LCB200N__		5.5	10.0~14.0	20	3	0.005	10	1kHz
VAS04LCB200L__		5.5	10.0~14.0	20	5	0.03	50	1kHz
VAS04LCB200L__		5.5	10.0~14.0	20	10	0.03	100	1kHz
VAS04LCB300L__		14	16.5 ~ 20.3	30	10	0.03	50	1kHz
VAS04LCB300L__		14	16.5 ~ 20.3	30	10	0.03	100	1kHz
VAS04LCB400L__		18	22.9 ~ 28.0	40	10	0.03	60	1kHz
VAS04LCB400M__		18	22.9 ~ 28.0	40	20	0.05	120	1kHz
VAS04LCB400N__		18	22.9 ~ 28.0	40	5	0.005	15	1kHz
VAS04LCB500N__		18	24.0 ~ 34.0	50	3	0.005	5	1MHz
VAS06LCB150N__		5.5	7.1 ~ 9.3	15.5	5	0.005	100	1kHz
VAS06LCB400M__		18	22.9 ~ 28.0	40	20	0.05	120	1kHz
VAS08LCB400A		18	22.9 ~ 28.0	40	25	0.1	160	1kHz

Low Capacitance (LC) Series

Termination Type : P = Plated (Ni-Sn Alloy)

Packaging (Pcs/Reel) : See Page 6



Part Numbering Specifications

Case Size	Part Number	Working* Voltage (Vw)	Breakdown Voltage (Vb)	Clamping Voltage (Vc)	Peak Current (Ip)	Transient Energy (Er)	Capacitance			Inductance
							(Typical)			L
							C		nF	
							nF	nF		
Volts	Volts	Volts	Amps	Joules	1kHz	1MHz	100m A/nS			
<50 A	1m A dc	1A 8/20 s	8/20 s	10/1000 s	1kHz	1MHz	100m A/nS			
0402	VAS0402B150Y_ _	5.6	7.6 - 9.3	15.5	20	0.05	—	0.36	<1.0	
	VAS0402C200Y_ _	9.0	11.0 - 14.0	20	20	0.05	—	0.23	<1.0	
	VAS0402E300Y_ _	14	16.5 - 20.3	30	20	0.05	—	0.12	<1.0	
	VAS0402F400Y_ _	18	22.9 - 28.0	40	20	0.05	—	0.09	<1.0	
0603	VAS0603A100A_ _	3.3 *	4.1 - 6.0	10	30	0.1	1.8	1.23	<1.0	
	VAS0603B150A_ _	5.6	7.6 - 9.3	15.5	30	0.1	1.0	0.825	<1.0	
	VAS0603C200A_ _	9.0	11.0 - 14.0	20	30	0.1	0.65	0.55	<1.0	
	VAS0603E300A_ _	14	16.5 - 20.3	30	30	0.1	0.50	0.425	<1.0	
	VAS0603F400A_ _	18	22.9 - 28.0	40	30	0.1	0.275	0.225	<1.0	
	VAS0603G580A_ _	26	31.0 - 38.0	58	30	0.1	0.20	0.16	<1.0	
	VAS0603H650A_ _	30	37.0 - 46.0	65	30	0.1	0.175	0.15	<1.0	
0805	VAS0805A100A_ _	3.3 *	4.1 - 6.0	10	40	0.1	1.3	0.93	<1.5	
	VAS0805A100B_ _	3.3 *	3.7 - 5.6	10	120	0.3	5.5	4.0	<1.5	
	VAS0805B150A_ _	5.6	7.6 - 9.3	15.5	40	0.1	1.25	0.86	<1.5	
	VAS0805B150B_ _	5.6	7.1 - 8.7	15.5	120	0.3	3.5	2.4	<1.5	
	VAS0805C200A_ _	9	11.0 - 14.0	20	40	0.1	0.78	0.585	<1.5	
	VAS0805D250A_ _	12	14.0 - 18.3	25	40	0.1	0.525	0.40	<1.5	
	VAS0805E300A_ _	14	16.5 - 20.3	30	40	0.1	0.375	0.28	<1.5	
	VAS0805E300B_ _	14	15.9 - 11.4	30	120	0.3	1.1	0.82	<1.5	
	VAS0805F400A_ _	18	22.9 - 28.0	40	30	0.1	0.35	0.275	<1.5	
	VAS0805F400A_ _X	18	22.9 - 28.0	40	40	0.1	0.35	0.275	<1.5	
	VAS0805F400B_ _	18	22.5 - 27.5	40	100	0.3	0.65	0.5	<1.5	
	VAS0805G580A_ _	26	31.0 - 38.0	58	30	0.1	0.14	0.11	<1.5	
	VAS0805G580A_ _X	26	31.0 - 38.0	58	40	0.1	0.14	0.11	<1.5	
	VAS0805G580B_ _	26	31.0 - 38.0	58	100	0.3	0.25	0.19	<1.5	
	VAS0805H650A_ _	30	37 - 46.0	65	30	0.1	0.1	0.08	<1.5	
VAS0805H650A_ _X	30	37 - 46.0	65	40	0.1	0.1	0.08	<1.5		

Termination Type : P = Plated (Ni-Sn Alloy)

Packaging (Pcs/Reel) : See Page 6

*Test Condition < 100 mA



VAREN

Chip Varistors
Surface Mount Transient Voltage Suppressors

VAS SERIES

Part Numbering Specifications

Case Size	Part Number	Working* Voltage (Vw)	Breakdown Voltage (Vb)	Clamping Voltage (Vc)	Peak Current (Ip)	Transient Energy (Er)	Capacitance (Typical)		Inductance
		Volts	Volts	Volts	Amps	Joules	C	L	
		<50 A	1mA dc	1A 8/20 s	8/20 s	10/1000 s	1KHz	1MHz	100 mA/nS
							nF	nH	
1206	VAS1206A100A_ _	3.3 *	4.1 - 6.0	10	40	0.1	2.0	1.5	<1.7
	VAS1206A100C_ _	3.3 *	3.7 - 5.6	10	150	0.4	4.7	3.8	<1.7
	VAS1206B150A_ _	5.6	7.6 - 9.3	15.5	40	0.1	1.2	0.87	<1.7
	VAS1206B150C_ _	5.6	7.1 - 8.7	15.5	150	0.4	3.0	2.3	<1.7
	VAS1206E300A_ _	14	16.5 - 20.3	30	40	0.1	0.6	0.5	<1.7
	VAS1206E300C_ _	14	15.9 - 19.4	30	150	0.4	1.2	0.9	<1.7
	VAS1206F400A_ _	18 **	22.9 - 28.0	40	30	0.1	0.35	0.27	<1.7
	VAS1206F400C_ _	18 **	22.5 - 27.5	40	150	0.4	0.8	0.635	<1.7
	VAS1206G580C_ _	26	30.5 - 37.3	58	120	0.4	0.55	0.45	<1.7
	VAS1206H650C_ _	30	36.0 - 45.0	65	120	0.4	0.5	0.4	<1.7
VAS1206I101C_ _	48	56.0 - 68.0	100	100	0.4	0.225	0.185	<1.7	
1210	VAS1210F390F_ _	18 **	21.5 - 26.5	39	500	1.5	3.1	2.4	<2.0
	VAS1210G560E_ _	26	29.7 - 36.3	56	300	1.2	2.15	1.675	<2.0
	VAS1210H620D_ _	30	35.0 - 43.0	62	220	0.9	1.9	1.53	<2.0
	VAS1210H620E_ _	30	35.0 - 43.0	62	280	1.2	1.975	1.575	<2.0
	VAS1210I101D_ _	48	54.5 - 66.5	100	220	0.9	0.5	0.43	<2.0
	VAS1210I101E_ _	48	54.5 - 66.5	100	250	1.2	0.525	0.45	<2.0
	VAS1210J121F_ _	60	67.0 - 83.0	120	250	1.5	0.45	0.375	<2.0

* Test Condition < 100 mA

** Withstands 24.5 VDC for 5 minutes (automotive applications)

NOTE :

Vc Maximum peak voltage across varistor, measured at a specified pulse current and waveform.

<u>Transient Energy Rating</u>	<u>Pulse Current & Waveform</u>
< 0.05 Joules	1A 8/20mS
0.1 Joules	2A 8/20mS
0.2 - 0.3 Joules	5A 8/20mS
≥ 0.4 Joules	10A 8/20mS

Vm Working voltage is a maximum recommended working voltage and is specified for operation at leakage current less than 50 A

Vb Voltage across device measured at 1mA DC current.

Ip Maximum peak current which may be applied with the specified waveform without device failure.

Er Maximum energy that can be dissipated with the specified waveform without device failure.

C Device capacitance measured with zero (0) volt bias 0.5VRmss and 1KHz, 1MHz.

L Device inductance measured with a current edge rate of 100 mA/nS