High Energy E Series Electrical Characteristics (5, 7, 10, 14, 18, 20 mm)

Part Number	Maximum Continuous Rated Voltage		Rated Single Pulse Transient		Varistor Voltage @1mA DC		Maximum Clamping Voltage @Test Current 8/20µs		Typical Capacitance @1KHZ 25°C
			Energy	Peak					
	AC RMS Volts	DC Volts	10/1000µs Joules	8/20µs Amps	Min Volts	Max Volts	Volts	Amps	pF
VZ05E820KBS	50	66	3.5	800	74	90	135	5	355
VZ07E820KBS			7	1750				10	790
VZ10E820KBS			14	3500				25	1780
VZ14E820KBS			28	6500				50	3310
VZ18E820KBS			46	8000				80	4300
VZ20E820KBS			56	10000				100	5300
VZ05E181KBS	120	160	8	800	170	207	310	5	130
VZ07E181KBS			16	1750			320	10	210
VZ10E181KBS			33	3500			320	25	460
VZ14E181KBS			56	6500			320	50	800
VZ18E181KBS			70	9000			320	80	1300
VZ20E181KBS			135	12000			320	100	1800
VZ05E201KBS	130	175	8.5	800	185	225	340	5	120
VZ07E201KBS			17.5	1750			330	10	200
VZ10E201KBS			42	3500			330	25	430
VZ14E201KBS			78	6500			330	50	770
VZ18E201KBS			140	9000			340	80	1270
VZ18E201KBS-V			160	12000			340	80	2000
VZ20E201KBS			170	12000			340	100	1700
VZ20E201KBS-V			195	15000			340	100	2200
VZ05E221KBS	140	180	9	800	198	242	360	5	110
VZ07E221KBS			19	1750				10	190
VZ10E221KBS			43	3500				25	410
VZ14E221KBS			85	6500				50	740
VZ18E221KBS			150	9000				80	1220
VZ18E221KBS-V			180	12000				80	1700
VZ20E221KBS			180	12000				100	1600
VZ20E221KBS-V			220	15000				100	2100

All parts approved as follows:
UL 1449 recognized (File # E196885).
UL 497B recognized (File # E135015). No voltage recognized beyond 680VAC.
UL 1414 recognized (File # E71602). No value recognized below 130VAC.
CSA 22.2 #1 certified (File # 227006). No value certified below 130VAC.
VDE (File # 40012630 for VZ07, VZ10, VZ14, and VZ18).
Note: VZ18 and VZ20 Series Types comply with Accelerated Aging Test Requirements per ANSI/IEEE C62.11, UL File # E196885.

High Energy E Series Electrical Characteristics (5, 7, 10, 14, 18, 20 mm) (cont.)

Part Number	Maximum Continuous Rated Voltage		Rated Single Pulse Transient		Varistor Voltage @1mA DC		Maximum Clamping Voltage @Test Current 8/20µs		Typical Capacitance @1KHZ 25°C
	AC RMS Volts	DC Volts	Energy 10/1000µs Joules	Peak 8/20µs Amps	Min Volts	Max Volts	Volts	Amps	pF
VZ05E241KBS	150	200	10.5	800	216	264	395	5	100
VZ07E241KBS			21	1750				10	170
VZ10E241KBS			45	3500				25	380
VZ14E241KBS			90	6500				50	700
VZ18E241KBS			155	9000				80	1200
VZ18E241KBS-V			195	12000				80	1500
VZ20E241KBS			190	12000				100	1500
VZ20E241KBS-V			240	15000				100	2000
VZ05E271KBS	180	230	11	800	255	311	475	5	90
VZ07E271KBS			24	1750			450	10	150
VZ10E271KBS			49	3500			450	25	350
VZ14E271KBS			99	6500			450	50	640
VZ18E271KBS			163	9000			455	80	1050
VZ20E271KBS			200	12000			455	100	1300
VZ20E301KBS	195	250	210	12000	270	330	505	100	1200
VZ05E331KBS	210	275	13	800	297	363	540	5	75
VZ07E331KBS			28	1750			540	10	130
VZ10E331KBS			58	3500			540	25	300
VZ14E331KBS			115	6500			545	50	580
VZ18E331KBS			190	9000			545	80	950
VZ20E331KBS			228	12000			545	100	1100
VZ05E361KBS	230	300	16	800	324	396	595	5	69
VZ07E361KBS			32	1750				10	123
VZ10E361KBS			65	3500				25	285
VZ14E361KBS			140	6500				50	540
VZ18E361KBS			220	9000				80	870
VZ20E361KBS			275	12000				100	1050

All parts approved as follows:
UL 1449 recognized (File # E196885).
UL 497B recognized (File # E135015). No voltage recognized beyond 680VAC.
UL 1414 recognized (File # E71602). No value recognized below 130VAC.
CSA 22.2 #1 certified (File # 227006). No value certified below 130VAC.
VDE (File # 40012630 for VZ07, VZ10, VZ14, and VZ18).
Note: VZ18 and VZ20 Series Types comply with Accelerated Aging Test Requirements per ANSI/IEEE C62.11, UL File # E196885.

High Energy E Series Electrical Characteristics (5, 7, 10, 14, 18, 20 mm) (cont.)

Part Number	Maximum Continuous Rated Voltage		Rated Single Pulse Transient		Varistor Voltage @1mA DC		Maximum Clamping Voltage @Test Current 8/20µs		Typical Capacitance @1KHZ 25°C
	AC RMS Volts	DC Volts	Energy 10/1000µs Joules	Peak 8/20µs Amps	Min Volts	Max Volts	Volts	Amps	pF
VZ05E391KBS	250	330	17	800	351	429	675	5	63
VZ07E391KBS			35	1750			650	10	116
VZ10E391KBS			70	3500			650	25	270
VZ14E391KBS			150	6500			650	50	500
VZ18E391KBS			245	9000			650	80	800
VZ20E391KBS			305	12000			650	100	1000
VZ05E431KBS	275	370	20	800	387	473	740	5	57
VZ07E431KBS			40	1750			710	10	108
VZ10E431KBS			80	3500			710	25	255
VZ14E431KBS			165	6500			710	50	460
VZ18E431KBS			270	9000			710	80	730
VZ20E431KBS			330	12000			710	100	950
VZ05E471KBS	300	385	21	800	423	517	775	5	50
VZ07E471KBS			42	1750				10	100
VZ10E471KBS			85	3500				25	230
VZ14E471KBS			175	6500				50	400
VZ18E471KBS			290	9000				80	660
VZ20E471KBS			350	12000				100	900
VZ10E511KBS	320	420	92	3500	459	561	840	25	210
VZ14E511KBS			190	6500				50	350
VZ18E511KBS			314	9000				80	570
VZ18E511KBS-V			350	12000				80	570
VZ20E511KBS			382	12000				100	800
VZ20E511KBS-V			400	15000				100	800

All parts approved as follows:
UL 1449 recognized (File # E196885).
UL 497B recognized (File # E135015). No voltage recognized beyond 680VAC.
UL 1414 recognized (File # E71602). No value recognized below 130VAC.
CSA 22.2 #1 certified (File # 227006). No value certified below 130VAC.
VDE (File # 40012630 for VZ07, VZ10, VZ14, and VZ18).
Note: VZ18 and VZ20 Series Types comply with Accelerated Aging Test Requirements per ANSI/IEEE C62.11, UL File # E196885.

High Energy E Series Electrical Characteristics (5, 7, 10, 14, 18, 20 mm) (cont.)

Part Number	Maximum Continuous Rated Voltage		Rated Single Pulse Transient		Varistor Voltage @1mA DC		Maximum Clamping Voltage @Test Current 8/20µs		Typical Capacitance @1KHZ 25°C
			Energy	Peak					
	AC RMS Volts	DC Volts	10/1000µs Joules	8/20µs Amps	Min Volts	Max Volts	Volts	Amps	pF
VZ10E561KBS	360	470	97	3500	522	638	910	25	170
VZ14E561KBS			210	6500				50	320
VZ18E561KBS			330	9000				80	560
VZ20E561KBS			420	12000				100	720
VZ20E621KBS	390	505	430	12000	558	682	1025	100	710
VZ20E681KBS	420	560	435	12000	612	748	1120	100	680
VZ20E751KBS	460	615	440	12000	675	825	1240	100	620
VZ20E781KBS	485	640	450	12000	702	858	1240	100	560
VZ10E821KBS	510	675	110	3500	738	902	1350	25	110
VZ14E821KBS			235	6500				50	190
VZ18E821KBS			388	9000				80	310
VZ20E821KBS			460	12000				100	530
VZ20E911KBS	550	745	510	12000	819	1001	1400	100	440
VZ20E102KBS	625	825	560	12000	900	1100	1620	100	425
VZ20E112KBS	680	895	620	12000	962	1175	1800	100	380

All parts approved as follows:
UL 1449 recognized (File # E196885).
UL 497B recognized (File # E135015). No voltage recognized beyond 680VAC.
UL 1414 recognized (File # E71602). No value recognized below 130VAC.
CSA 22.2 #1 certified (File # 227006). No value certified below 130VAC.
VDE (File # 40012630 for VZ07, VZ10, VZ14, and VZ18).
Note: VZ18 and VZ20 Series Types comply with Accelerated Aging Test Requirements per ANSI/IEEE C62.11, UL File # E196885.