赫品电子
ECUBE-TECHNOLOGY

TVS (Transient Voltage Suppressor) Specification

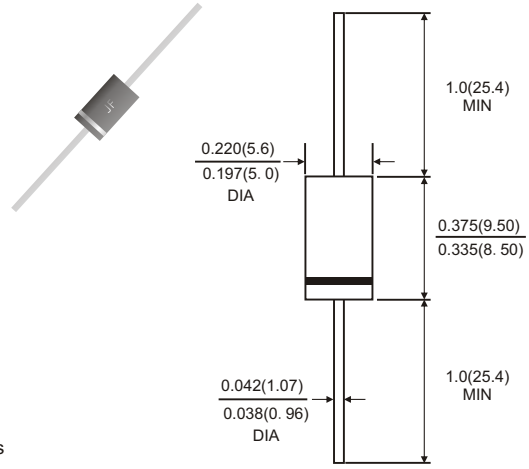
Axial Lead 1.5KE Series

Version No.:ADB2-TVS-1.5KE-AS

FEATURES

- 1500 Watts Pulse capability
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component inaccordance to RoHS 2002/95/EC and WEEE 2002/96/EC

DO-201AD



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case:Molded plastic
- EPOXY:UL 94V-0 rate flame retardant
- Lead: MIL-STD-202E, Method 208 guatanteed
- Polarity: Color band denotes positive end（cathode）except bidirectional types
- Mounting position：Any
  Weight:1.2 grams

DEVICES FOR BIDIRECTIONAL APPLICATIONS

- For bi-directional use C or CA suffix（e. g. 1. 5P4KE6. 8C, 1. 5KE400CA）Electrical characterstics apply in both directions

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

（Rating at 25 °C ambient temperature unless otherwise specified）

	Symbols	Valuse	Units
Peak power dissipation at T_A=25 C, T_P=1ms(Note 1.)	P_{PPM}	Min. 1500	Watts
Steady state power dissipation at Tj=75 C lead length 0. 375"(9. 5mm) (Note 2.)	P_M	5. 0	Watts
Peak forward surge current, 8. 3ms single half sine-wave superimposed on rated load (JEDEC method) (Note 3.)	I_{FSM}	400	Amps
Maximum instantaneous forward voltage at 50. 0A for unidirecional only (Note 4.)	V_F	3. 5/5. 0	Volts
Operating jumction and storage temperature range	T_J, T_{STG}	-55 to +175	°C

Note: 1.Non repetitive current pulse and derated above T_A=25°C

2.Mounted on copper pads area of 0. 8X0. 8"(40X40mm)

3.Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum

4.V_F=3.5 Volts max. for devices of $V_{(BR)} \leq 200V$, and VF=5.0Volts max. for devices of $V_{(BR)}$>200V

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TYPE	Breakdown Voltage $V_{(BR)}$ (Volts)		Test Current IT (mA)	Reverse Stand off Voltage V_{WM} (Volts)	Maximum Reverse Leadage At V_{WM} I_D (uA)	Maximum Peak Pulse Current Ippm (Amps)	Maximum Clamping Voltage At Ippm V_C (Volts)	Maximum Temperature Coefficient of $V_{(BR)}$ % / ℃
	MIN	MAX						
1.5KE6.8	6.12	7.48	10.0	5.50	1,000.0	145.0	10.8	0.057
1.5KE6.8A	6.45	7.14	10.0	5.80	1,000.0	150.0	10.5	0.057
1.5KE7.5	6.75	8.25	10.0	6.05	500.0	134.0	11.7	0.061
1.5KE7.5A	7.13	7.88	10.0	6.40	500.0	139.0	11.3	0.061
1.5KE8.2	7.38	9.02	10.0	6.63	200.0	126.0	12.5	0.065
1.5KE8.2A	7.79	8.61	10.0	7.02	200.0	130.0	12.1	0.065
1.5KE9.1	8.19	10.0	1.0	7.37	50.0	114.0	13.8	0.068
1.5KE9.1A	8.65	9.55	1.0	7.78	50.0	117.0	13.4	0.068
1.5KE10	9.00	11.0	1.0	8.10	10.0	105.0	15.0	0.073
1.5KE10A	9.50	10.5	1.0	8.55	10.0	108.0	14.5	0.073
1.5KE11	9.90	12.1	1.0	8.92	5.0	97.0	16.2	0.075
1.5KE11A	10.5	11.6	1.0	9.40	5.0	100.0	15.6	0.075
1.5KE12	10.8	13.2	1.0	9.72	5.0	91.0	17.3	0.078
1.5KE12A	11.4	12.6	1.0	10.2	5.0	94.0	16.7	0.078
1.5KE13	11.7	14.3	1.0	10.5	5.0	82.0	19.0	0.081
1.5KE13A	12.4	13.7	1.0	11.1	5.0	86.0	18.2	0.081
1.5KE15	13.5	16.5	1.0	12.1	5.0	71.0	22.0	0.084
1.5KE15A	14.3	15.8	1.0	12.8	5.0	74.0	21.2	0.084
1.5KE16	14.4	17.6	1.0	12.9	5.0	67.0	23.5	0.086
1.5KE16A	15.2	16.8	1.0	13.6	5.0	70.0	22.5	0.086
1.5KE18	16.2	19.8	1.0	14.5	5.0	59.0	26.5	0.088
1.5KE18A	17.1	18.9	1.0	15.3	5.0	60.0	25.2	0.088
1.5KE20	18.0	22.0	1.0	16.2	5.0	54.0	29.1	0.090
1.5KE20A	19.0	21.0	1.0	17.1	5.0	56.0	27.7	0.090
1.5KE22	19.8	24.2	1.0	17.8	5.0	49.0	31.9	0.092
1.5KE22A	20.9	23.1	1.0	18.8	5.0	51.0	30.6	0.092
1.5KE24	21.6	26.4	1.0	19.4	5.0	45.0	34.7	0.094
1.5KE24A	22.8	25.2	1.0	20.5	5.0	47.0	33.2	0.094
1.5KE27	24.3	29.7	1.0	21.8	5.0	40.0	39.1	0.096
1.5KE27A	25.7	28.4	1.0	23.1	5.0	42.0	37.5	0.096
1.5KE30	27.0	33.0	1.0	24.3	5.0	36.0	43.5	0.097
1.5KE30A	28.5	31.5	1.0	25.6	5.0	38.0	41.4	0.097
1.5KE33	29.7	36.3	1.0	26.8	5.0	33.0	47.7	0.098
1.5KE33A	31.4	34.7	1.0	28.2	5.0	34.0	45.7	0.098
1.5KE36	32.4	39.6	1.0	29.1	5.0	30.0	52.0	0.099
1.5KE36A	34.2	37.8	1.0	30.8	5.0	31.0	49.9	0.099
1.5KE39	35.1	42.9	1.0	31.6	5.0	27.0	56.4	0.100
1.5KE39A	37.1	41.0	1.0	33.3	5.0	29.0	53.9	0.100
1.5KE43	38.7	47.3	1.0	34.8	5.0	25.0	61.9	0.101
1.5KE43A	40.9	45.2	1.0	36.8	5.0	26.0	59.3	0.101
1.5KE47	42.3	51.7	1.0	38.1	5.0	23.0	67.8	0.101
1.5KE47A	44.7	49.4	1.0	40.2	5.0	24.0	64.8	0.101
1.5KE51	45.9	56.1	1.0	41.3	5.0	21.0	73.5	0.102
1.5KE51A	48.5	53.6	1.0	43.6	5.0	22.0	70.1	0.102
1.5KE56	50.4	61.6	1.0	45.4	5.0	19.0	80.5	0.103
1.5KE56A	53.2	58.8	1.0	47.8	5.0	20.0	77.0	0.103

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	MIN	MAX						
1.5KE62	55.8	68.2	1.0	50.2	5.0	17.0	89.0	0.104
1.5KE62A	58.9	65.1	1.0	53.0	5.0	18.0	85.0	0.104
1.5KE68	61.2	74.8	1.0	55.1	5.0	16.0	98.0	0.104
1.5KE68A	64.6	71.4	1.0	58.1	5.0	17.0	92.0	0.104
1.5KE75	67.5	82.5	1.0	60.7	5.0	14.0	108.0	0.105
1.5KE75A	71.3	78.8	1.0	64.1	5.0	15.0	103.0	0.105
1.5KE82	73.8	90.2	1.0	66.4	5.0	13.0	118.0	0.105
1.5KE82A	77.9	86.1	1.0	70.1	5.0	13.9	113.0	0.105
1.5KE91	81.9	100.0	1.0	73.7	5.0	12.0	131.0	0.106
1.5KE91A	86.5	95.5	1.0	77.8	5.0	12.6	125.0	0.106
1.5KE100	90.0	110	1.0	81.0	5.0	10.9	144.0	0.106
1.5KE100A	95.0	105	1.0	85.5	5.0	11.4	137.0	0.106
1.5KE110	99.0	121	1.0	89.2	5.0	9.9	158.0	0.107
1.5KE110A	105	116	1.0	94.0	5.0	10.3	152.0	0.107
1.5KE120	108	132	1.0	97.2	5.0	9.1	173.0	0.107
1.5KE120A	114	126	1.0	102	5.0	9.5	165.0	0.107
1.5KE130	117	143	1.0	106	5.0	8.4	187.0	0.107
1.5KE130A	124	137	1.0	111	5.0	8.7	179.0	0.107
1.5KE150	135	165	1.0	121	5.0	7.3	215.0	0.108
1.5KE150A	143	158	1.0	128	5.0	7.6	207.0	0.108
1.5KE160	144	176	1.0	130	5.0	6.8	230.0	0.108
1.5KE160A	152	168	1.0	136	5.0	7.1	219.0	0.108
1.5KE170	153	187	1.0	138	5.0	6.4	244.0	0.108
1.5KE170A	162	179	1.0	145	5.0	6.7	234.0	0.108
1.5KE180	162	198	1.0	146	5.0	6.1	258.0	0.108
1.5KE180A	171	189	1.0	154	5.0	6.4	246.0	0.108
1.5KE200	180	220	1.0	162	5.0	5.4	287.0	0.108
1.5KE200A	190	210	1.0	171	5.0	5.7	274.0	0.108
1.5KE220	198	242	1.0	175	5.0	4.5	344.0	0.108
1.5KE220A	209	231	1.0	185	5.0	4.8	328.0	0.108
1.5KE250	225	275	1.0	202	5.0	4.3	360.0	0.110
1.5KE250A	237	263	1.0	214	5.0	4.5	344.0	0.110
1.5KE300	270	330	1.0	243	5.0	3.6	430.0	0.110
1.5KE300A	285	315	1.0	256	5.0	3.8	414.0	0.110
1.5KE350	315	385	1.0	284	5.0	3.1	504.0	0.110
1.5KE350A	333	368	1.0	300	5.0	3.2	482.0	0.110
1.5KE400	360	440	1.0	324	5.0	2.7	574.0	0.110
1.5KE400A	380	420	1.0	342	5.0	2.8	548.0	0.110
1.5KE440	396	484	1.0	356	5.0	2.4	631.0	0.110
1.5KE440A	418	462	1.0	376	5.0	2.6	602.0	0.110

Notes: 1.$V_{(BR)}$ measured after I_T applied for 300μS, I_T=square wave pulse or equivalent.

2. For bidirectional types having V_{WM} of 10 Volts and less, The I_D limit is doubled.

FIG. 1–PEAK PULSE POWER CURVE

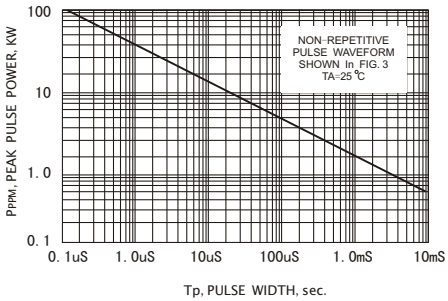


FIG. 2–PULSE DERATING CURVE

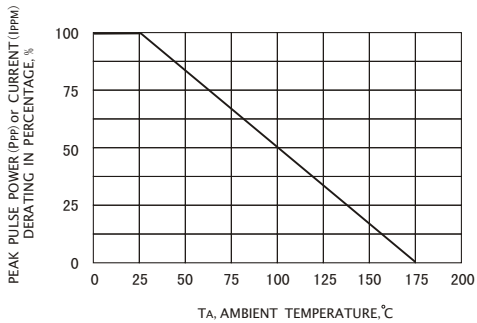


FIG. 3–PULSE WAVEFORM

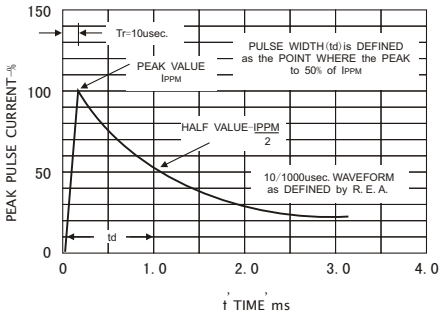


FIG. 4–STEADY STATE POWER DERATING CURVE

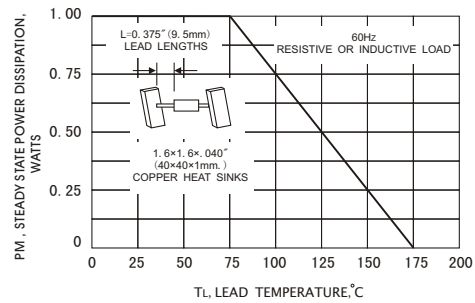


FIG. 5–TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

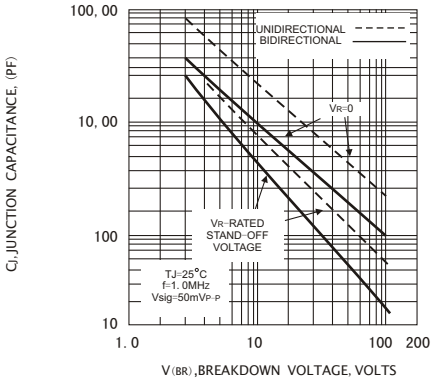
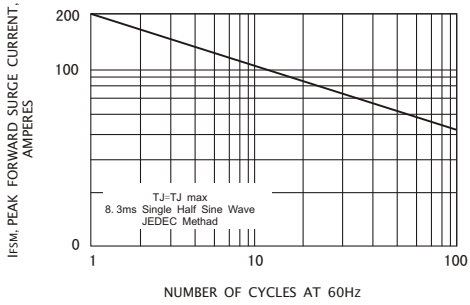


FIG. 6–MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL



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