

GLASS PASSIVAED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

Features

- ◆ 400w peak pulse power capability
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Fast response time: typically less than 1.0ps from 0v
- ◆ to VBR for unidirectional and 5.0ns ror bidirectional
- ◆ types. High temperature soldering guaranteed:
265 C/10S/9.5mm lead length at 5 lbs tension

DO-41



Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	VALUE	UNITS
Peak power dissipation	PPPM	Minimum 400	W
Peak pulse reverse current	I _{PPM}	See Table 1	A
Steady state power dissipation (Note 2)	P _{M(AV)}	1.0	W
Peak forward surge current	I _{FSM}	40	A
Maximum instantaneous forward voltage at 25A for unidirectional only (Note 4)	V _F	3.5/6.5	V
Operating junction and storage temperature range	T _{STG} , T _J	-55 to + 175	°C

Notes:

1. 10/1000μs waveform non-repetitive current pulse, per Fig.3 and derated above Ta=25 °C per Fig.2
2. T_L=75°C, lead lengths 9.5mm, Mounted on copper pad area of (40x40mm) Fig.5
3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.
4. V_F=3.5V max. for devices of V_(BR)<200V, and V_F=6.5V max. for devices of V_(BR)>200V

ELECTRICAL CHARACTERISTICS (at TA=25 °C unless otherwise noted)

Device Type	Breakdown Voltage V _(BR) (Volts)(NOTES 1)		Test Current I _T (mA)	Stand-off Voltage V _{WM} (Volts)	Maximum Reverse Leakage at V _{WM} I _D (NOTE3)(μA)	Maximum Peak Pulse Reverse Current I _{PPM} (NOTE2) (Amps)	Maximum Clamping Voltage at I _{PPM} V _C (Volts)	Maximum Temperature Coefficient of V _(BR) (%/°C)
	MIN	MAX						
P4KE6.8A	6.45	7.14	10.0	5.80	1000.0	38.1	10.5	0.057
P4KE6.8CA	6.45	7.14	10.0	5.80	1000.0	38.1	10.5	0.057
P4KE7.5A	7.13	7.88	10.0	6.40	500.0	35.4	11.3	0.061
P4KE7.5CA	7.13	7.88	10.0	6.40	500.0	35.4	11.3	0.061
P4KE8.2A	7.79	8.61	10.0	7.02	200.0	33.1	12.1	0.065
P4KE8.2CA	7.79	8.61	10.0	7.02	200.0	33.1	12.1	0.065
P4KE9.1A	8.65	9.55	1.0	7.78	50.0	29.9	13.4	0.068
P4KE9.1CA	8.65	9.55	1.0	7.78	50.0	29.9	13.4	0.068
P4KE10A	9.50	10.5	1.0	8.55	10.0	27.6	14.5	0.073
P4KE10CA	9.50	10.5	1.0	8.55	10.0	27.6	14.5	0.073
P4KE11A	10.5	11.6	1.0	9.40	5.0	25.6	15.6	0.075
P4KE11CA	10.5	11.6	1.0	9.40	5.0	25.6	15.6	0.075
P4KE12A	11.4	12.6	1.0	10.2	5.0	24.0	16.7	0.078
P4KE12CA	11.4	12.6	1.0	10.2	5.0	24.0	16.7	0.078
P4KE13A	12.4	13.7	1.0	11.1	5.0	22.0	18.2	0.081
P4KE13CA	12.4	13.7	1.0	11.1	5.0	22.0	18.2	0.081
P4KE15A	14.3	15.8	1.0	12.8	5.0	18.9	21.2	0.084
P4KE15CA	14.3	15.8	1.0	12.8	5.0	18.9	21.2	0.084
P4KE16A	15.2	16.8	1.0	13.6	5.0	17.8	22.5	0.086
P4KE16CA	15.2	16.8	1.0	13.6	5.0	17.8	22.5	0.086
P4KE18A	17.1	18.9	1.0	15.3	5.0	15.9	25.5	0.088
P4KE18CA	17.1	18.9	1.0	15.3	5.0	15.9	25.5	0.088
P4KE20A	19.0	21.0	1.0	17.1	5.0	14.4	27.7	0.090
P4KE20CA	19.0	21.0	1.0	17.1	5.0	14.4	27.7	0.090
P4KE22A	20.9	23.1	1.0	18.8	5.0	13.1	30.6	0.092
P4KE22CA	20.9	23.1	1.0	18.8	5.0	13.1	30.6	0.092
P4KE24A	22.8	25.2	1.0	20.5	5.0	12.0	33.2	0.094
P4KE24CA	22.8	25.2	1.0	20.5	5.0	12.0	33.2	0.094
P4KE27A	25.7	28.4	1.0	23.1	5.0	10.7	37.5	0.096
P4KE27CA	25.7	28.4	1.0	23.1	5.0	10.7	37.5	0.096
P4KE30A	28.5	31.5	1.0	25.6	50.	9.7	41.4	0.097
P4KE30CA	28.5	31.5	1.0	25.6	50.	9.7	41.4	0.097
P4KE33A	31.4	34.7	1.0	28.2	5.0	8.8	45.7	0.098
P4KE33CA	31.4	34.7	1.0	28.2	5.0	8.8	45.7	0.098
P4KE36A	34.2	37.8	1.0	30.8	5.0	8.0	49.9	0.099
P4KE36CA	34.2	37.8	1.0	30.8	5.0	8.0	49.9	0.099
P4KE39A	37.1	41.0	1.0	33.3	5.0	7.4	53.9	0.100
P4KE39CA	37.1	41.0	1.0	33.3	5.0	7.4	53.9	0.100
P4KE43A	40.9	45.2	1.0	36.8	5.0	6.7	59.3	0.101
P4KE43CA	40.9	45.2	1.0	36.8	5.0	6.7	59.3	0.101
P4KE47A	44.7	49.4	1.0	40.2	5.0	6.2	64.8	0.101
P4KE47CA	44.7	49.4	1.0	40.2	5.0	6.2	64.8	0.101
P4KE51A	48.5	53.6	1.0	43.6	5.0	5.7	70.1	0.102
P4KE51CA	48.5	53.6	1.0	43.6	5.0	5.7	70.1	0.102
P4KE56A	53.2	58.8	1.0	47.8	5.0	5.2	77.0	0.103
P4KE56CA	53.2	58.8	1.0	47.8	5.0	5.2	77.0	0.103

The electrical characteristics above is for reference only.

ELECTRICAL CHARACTERISTICS (at TA=25 °C unless otherwise noted)

Device Type	Breakdown Voltage V _(BR) (Volts)(NOTES 1)		Test Current I _T (mA)	Stand-off Voltage V _{WM} (Volts)	Maximum Reverse Leakage at V _{WM} I _D (NOTE3)(μA)	Maximum Peak Pulse Reverse Current I _{PPM} (NOTE2) (Amps)	Maximum Clamping Voltage at I _{PPM} V _C (Volts)	Maximum Temperature Coefficient of V _(BR) (%/°C)
	MIN	MAX						
P4KE62A	58.9	65.1	1.0	53.0	5.0	4.7	85.0	0.104
P4KE62CA	58.9	65.1	1.0	53.0	5.0	4.7	85.0	0.104
P4KE68A	64.6	71.4	1.0	58.1	5.0	4.3	92.0	0.104
P4KE68CA	64.6	71.4	1.0	58.1	5.0	4.3	92.0	0.104
P4KE75A	71.3	78.8	1.0	64.1	5.0	3.9	103	0.105
P4KE75CA	71.3	78.8	1.0	64.1	5.0	3.9	103	0.105
P4KE82A	77.9	86.1	1.0	70.1	5.0	3.5	113	0.105
P4KE82CA	77.9	86.1	1.0	70.1	5.0	3.5	113	0.105
P4KE91A	86.5	95.5	1.0	77.8	5.0	3.2	125	0.106
P4KE91CA	86.5	95.5	1.0	77.8	5.0	3.2	125	0.106
P4KE100A	95.0	105	1.0	85.5	5.0	2.9	137	0.106
P4KE100CA	95.0	105	1.0	85.5	5.0	2.9	137	0.106
P4KE110A	105	116	1.0	94.0	5.0	2.6	152	0.107
P4KE110CA	105	116	1.0	94.0	5.0	2.6	152	0.107
P4KE120A	114	126	1.0	102	5.0	2.4	165	0.107
P4KE120CA	114	126	1.0	102	5.0	2.4	165	0.107
P4KE130A	124	137	1.0	111	5.0	2.2	179	0.107
P4KE130CA	124	137	1.0	111	5.0	2.2	179	0.107
P4KE150A	143	158	1.0	128	5.0	1.9	207	0.108
P4KE150CA	143	158	1.0	128	5.0	1.9	207	0.108
P4KE160A	152	168	1.0	136	5.0	1.8	219	0.108
P4KE160CA	152	168	1.0	136	5.0	1.8	219	0.108
P4KE170A	162	179	1.0	145	5.0	1.7	234	0.108
P4KE170CA	162	179	1.0	145	5.0	1.7	234	0.108
P4KE180A	171	189	1.0	154	5.0	1.6	246	0.108
P4KE180CA	171	189	1.0	154	5.0	1.6	246	0.108
P4KE200A	190	210	1.0	171	5.0	1.5	274	0.108
P4KE200CA	190	210	1.0	171	5.0	1.5	274	0.108
P4KE220A	209	231	1.0	185	5.0	1.2	328	0.108
P4KE220CA	209	231	1.0	185	5.0	1.2	328	0.108
P4KE250A	237	267	1.0	214	5.0	1.2	344	0.110
P4KE250CA	237	267	1.0	214	5.0	1.2	344	0.110
P4KE300A	285	315	1.0	256	5.0	1.0	414	0.110
P4KE300CA	285	315	1.0	256	5.0	1.0	414	0.110
P4KE350A	332	368	1.0	300	5.0	0.83	482	0.110
P4KE350CA	332	368	1.0	300	5.0	0.83	482	0.110
P4KE400A	380	420	1.0	342	5.0	0.73	548	0.110
P4KE400CA	380	420	1.0	342	5.0	0.73	548	0.110
P4KE440A	418	462	1.0	376	5.0	0.66	602	0.110
P4KE440CA	418	462	1.0	376	5.0	0.66	602	0.110

NOTES:

- 1.V_(BR)measured after I_T applied for 300μs,I_T=square wave pulse or equivalent
2. Surge current waveform per Fig.3 and derated per Fig.2
3. For bidirectional types having V_{WM} of 10 volts and less,the I_D limit is doubled
4. All items and symbols are consistent with ANSI/IEEE C62.35

The electrical characteristics above is for reference only.

FIG. 1-PEAK PULSE POWER RATING CURVE



FIG. 2-PULSE DERATING CURVE

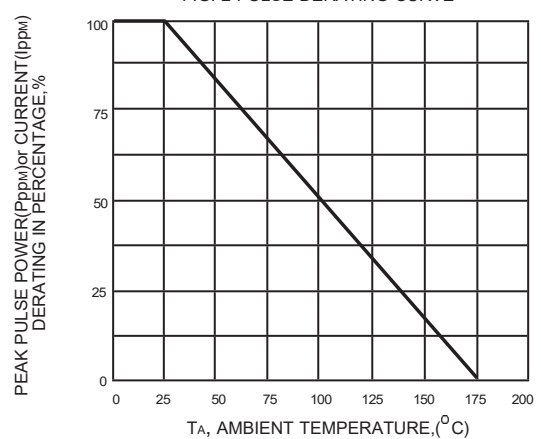


FIG.3-PULSE WAVEFORM

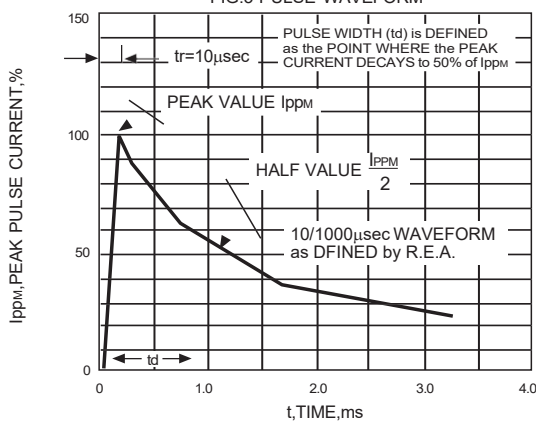


FIG. 4-TYPICAL JUNCTIONAL CAPACITANCE UNIDIRECTIONAL

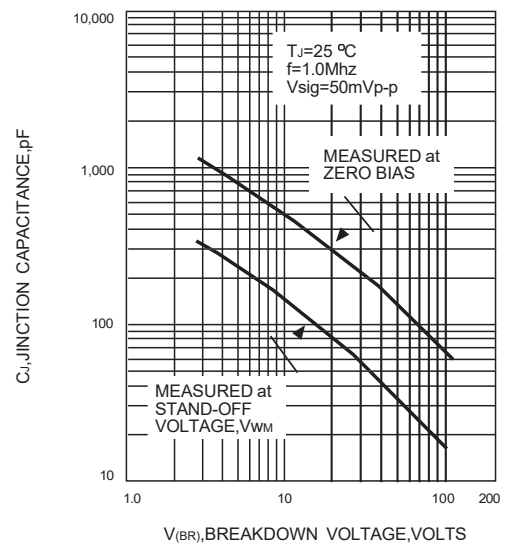


FIG.5-STEADY STATE POWER DERATING CURVE



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

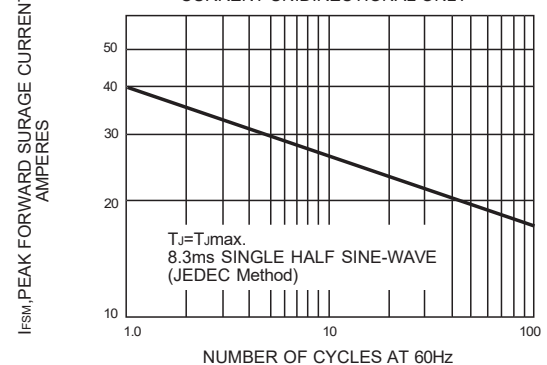
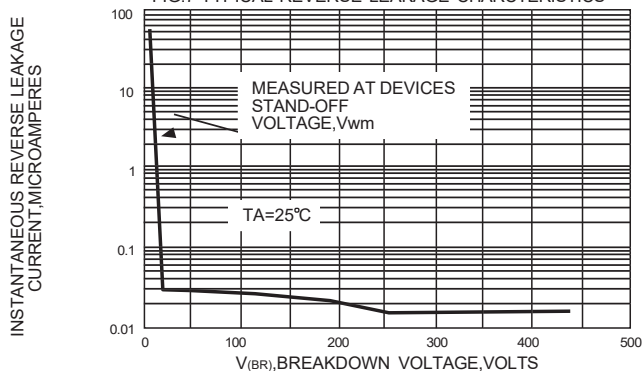


FIG.7-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



The curve characteristics above is for reference only.