

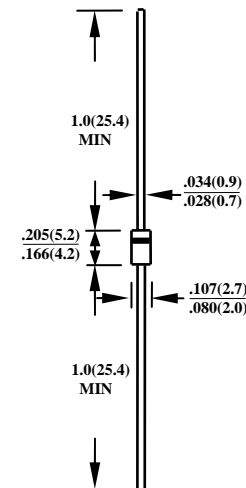
400W TRANSIENT VOLTAGE SUPPRESSOR

FEATURES

- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94V-0
- 400W SURGE CAPABILITY AT 1ms
- EXCELLENT CLAMPING CAPABILITY
- LOW ZENER IMPEDANCE
- FAST RESPONSE TIME: TYPICALLY LESS THAN 1.0 PS FROM 0 VOLTS TO BV MIN
- TYPICAL IR LESS THAN 1μA ABOVE 10V
- HIGH TEMPERATURE SOLDERING GUARANTEED: 260°C / 10S / .375" (9.5mm) LEAD LENGTH / 5LBS., (2.3KG) TENSION

MECHANICAL DATA

- CASE : MOLDED PLASTIC
- TERMINALS : AXIAL LEADS, SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY : COLOR BAND DENOTED CATHODE EXCEPT BIPOLAR
- WEIGHT : 0.34 GRAMS



CASE : DO41
DIMENSIONS IN INCHES AND (MILLIMETERS)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED

RATINGS	SYMBOL	VALUE	UNITS
PEAK POWER DISSIPATION AT TA=25°C, TP=1ms(NOTE1)	P _{PK}	MINIMUM 400	WATTS
PEAK PULSE CURRENT WITH A 10/1000us WAVEFORM(NOTE 1)	I _{PPM}	SEE NEXT TABLE	A
STEADY STATE POWER DISSIPATION AT T _L =75°C, LEAD LENGTHS 0.375" (9.5mm) (NOTE2)	P _{M(AV)}	1.0	WATTS
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD (JEDEC METHOD) (NOTE 3)	I _{FSM}	40.0	Amps
TYPICAL THERMAL RESISTANCE JUNCTION-TO-AMBIENT	R _{θJA}	100	°C/W
OPERATING AND STORAGE TEMPERATURE RANGE	T _J , T _{STG}	- 55 TO + 175	°C

- NOTE :
1. NON-REPETITIVE CURRENT PULSE, PER FIG.3 AND DERATED ABOVE TA=25°C PER FIG 2.
 2. MOUNTED ON COPPER PAD AREA OF 1.6x1.6" (40x40mm) PER FIG. 5
 3. 8.3ms SINGLE HALF SINE-WAVE, DUTY CYCLE=4 PULSES PER MINUTES MAXIMUM
 4. FOR BIDIRECTIONAL USE C SUFFIX FOR 10% TOLERANCE, CA SUFFIX FOR 5% TOLERANCE

DEVICE	BREAKDOWN VOLTAGE			WORKING PEAK REVERSE VOLTAGE V_{RWM} (VOLTS)	MAXIMUM REVERSE LEAKAGE AT V_{RWM} $I_R(\mu A)$	MAXIMUM REVERSE CURRENT I_{RSM} (AMPS)	MAX CLAMPING VOLTAGE V_{RWM} (VOLTS)	MAXIMUM TEMPERATURE COEFFICIENT OF V_{BR} (%C)
	B_{BR} (VOLTS)		@IT (mA)					
	MIN	MAX						
P4KE6.8(C)	6.12	7.48	10	5.50	1000	38	10.8	0.057
P4KE6.8(C)A	6.45	7.14	10	5.80	1000	40	10.5	0.057
P4KE7.5(C)	6.75	8.25	10	6.05	500	36	11.7	0.061
P4KE7.5(C)A	7.13	7.88	10	6.40	500	37	11.3	0.061
P4KE8.2(C)	7.38	9.02	10	6.63	200	33	12.5	0.065
P4KE8.2(C)A	7.79	8.61	10	7.02	200	35	12.1	0.065
P4KE9.1(C)	8.19	10.0	1.0	7.37	50	30	13.8	0.068
P4KE9.1(C)A	8.65	9.55	1.0	7.78	50	31	13.4	0.068
P4KE10(C)	9.00	11.0	1.0	8.10	10	28	15.0	0.073
P4KE10(C)A	9.50	10.5	1.0	8.55	10	29	14.5	0.073
P4KE11(C)	9.90	12.1	1.0	8.92	5.0	26	16.2	0.075
P4KE11(C)A	10.5	11.6	1.0	9.40	5.0	27	15.6	0.076
P4KE12(C)	10.8	13.2	1.0	9.72	5.0	24	17.3	0.078
P4KE12(C)A	11.4	12.6	1.0	10.2	5.0	25	16.7	0.078
P4KE13(C)	11.7	14.3	1.0	10.5	5.0	22	19.0	0.081
P4KE13(C)A	12.4	13.7	1.0	11.1	5.0	23	18.2	0.081
P4KE15(C)	13.5	16.5	1.0	12.1	5.0	19	22.0	0.084
P4KE15(C)A	14.3	15.8	1.0	12.8	5.0	20	21.2	0.084
P4KE16(C)	14.4	17.6	1.0	12.9	5.0	18	23.5	0.086
P4KE16(C)A	15.2	16.8	1.0	13.6	5.0	19	22.5	0.086
P4KE18(C)	16.2	19.8	1.0	14.5	5.0	16	26.5	0.088
P4KE18(C)A	17.1	18.9	1.0	15.3	5.0	17	25.5	0.088
P4KE20(C)	18.0	22.0	1.0	16.2	5.0	14	29.1	0.090
P4KE20(C)A	19.0	21.0	1.0	17.1	5.0	15	27.7	0.090
P4KE22(C)	19.8	24.2	1.0	17.8	5.0	13	31.9	0.092
P4KE22(C)A	20.9	23.1	1.0	18.8	5.0	14	30.6	0.092
P4KE24(C)	21.6	26.4	1.0	19.4	5.0	12	34.7	0.094
P4KE24(C)A	22.8	25.2	1.0	20.5	5.0	13	33.2	0.094
P4KE27(C)	24.3	29.7	1.0	21.8	5.0	11	39.1	0.096
P4KE27(C)A	25.7	28.4	1.0	23.1	5.0	11.2	37.5	0.096
P4KE30(C)	27.0	33.0	1.0	24.3	5.0	10	43.5	0.097
P4KE30(C)A	28.5	31.5	1.0	25.6	5.0	10	41.4	0.097
P4KE33(C)	29.7	36.3	1.0	26.8	5.0	9	47.7	0.098
P4KE33(C)A	31.4	34.7	1.0	28.2	5.0	9	45.7	0.098
P4KE36(C)	32.4	39.6	1.0	29.1	5.0	8	52.0	0.099
P4KE36(C)A	34.2	37.8	1.0	30.8	5.0	8.4	49.9	0.099
P4KE39(C)	35.1	42.9	1.0	31.6	5.0	7.4	56.4	0.100
P4KE39(C)A	37.1	41.0	1.0	33.3	5.0	7.8	53.9	0.100
P4KE43(C)	38.7	47.3	1.0	34.8	5.0	6.8	61.9	0.101
P4KE43(C)A	40.9	45.2	1.0	36.8	5.0	7.1	59.3	0.101
P4KE47(C)	42.3	51.7	1.0	38.1	5.0	6.2	67.8	0.101
P4KE47(C)A	44.7	49.4	1.0	40.2	5.0	6.5	64.8	0.101
P4KE51(C)	45.9	56.1	1.0	41.3	5.0	5.7	73.5	0.102
P4KE51(C)A	48.5	53.6	1.0	43.6	5.0	6.0	70.1	0.102
P4KE56(C)	50.4	61.6	1.0	45.4	5.0	5.2	80.5	0.103
P4KE56(C)A	53.2	58.8	1.0	47.8	5.0	5.5	77.0	0.103
P4KE62(C)	55.8	68.2	1.0	50.2	5.0	4.7	89.0	0.104
P4KE62(C)A	58.9	65.1	1.0	53.0	5.0	5.0	85.0	0.104
P4KE68(C)	61.2	74.8	1.0	55.1	5.0	4.3	98.0	0.104
P4KE68(C)A	64.6	71.4	1.0	58.1	5.0	4.6	92.0	0.104
P4KE75(C)	67.5	82.5	1.0	60.7	5.0	3.9	108.0	0.105
P4KE75(C)A	71.3	78.8	1.0	64.1	5.0	4.1	103.0	0.105
P4KE82(C)	73.8	90.2	1.0	66.4	5.0	3.6	118.0	0.105
P4KE82(C)A	77.9	86.1	1.0	70.1	5.0	3.7	113.0	0.105
P4KE91(C)	81.9	100.0	1.0	73.7	5.0	3.2	131.8	0.106
P4KE91(C)A	86.5	95.50	1.0	77.8	5.0	3.4	125.0	0.106
P4KE100(C)	90.0	110.0	1.0	81.0	5.0	2.9	144.0	0.106
P4KE100(C)A	95.0	105.0	1.0	85.5	5.0	3.1	137.0	0.106

DEVICE	BREAKDOWN VOLTAGE		@IT (mA)	WORKING PEAK REVERSE VOLTAGE V_{RWM} (VOLTS)	MAXIMUM REVERSE LEAKAGE AT V_{RWM} $I_R(\mu A)$	MAXIMUM REVERSE CURRENT I_{RSM} (AMPS)	MAX CLAMPING VOLTAGE V_{RWM} (VOLTS)	MAXIMUM TEMPERATURE COEFFICIENT OF V_{RR} (%C)
	B_{BR} (VOLTS)							
	MIN	MAX						
P4KE110(C)	99.0	121.0	1.0	89.2	5.0	2.7	158.0	0.107
P4KE110(C)A	105.0	116.0	1.0	94.0	5.0	2.8	152.0	0.107
P4KE120(C)	108.0	132.0	1.0	97.2	5.0	2.4	173.0	0.107
P4KE120(C)A	114.0	126.0	1.0	102.0	5.0	2.5	165.0	0.107
P4KE130(C)	117.0	143.0	1.0	105.0	5.0	2.2	187.0	0.107
P4KE130(C)A	124.0	137.0	1.0	111.0	5.0	2.3	179.0	0.107
P4KE150(C)	135.0	165.0	1.0	121.0	5.0	2.0	215.0	0.108
P4KE150(C)A	143.0	158.0	1.0	128.0	5.0	2.0	207.0	0.108
P4KE160(C)	144.0	176.0	1.0	130.0	5.0	1.8	230.0	0.108
P4KE160(C)A	152.0	168.0	1.0	136.0	5.0	1.9	219.0	0.108
P4KE170(C)	153.0	187.0	1.0	138.0	5.0	1.7	244.0	0.108
P4KE170(C)A	162.0	179.0	1.0	145.0	5.0	1.8	234.0	0.108
P4KE180(C)	162.0	198.0	1.0	146.0	5.0	1.6	258.0	0.108
P4KE180(C)A	171.0	189.0	1.0	154.0	5.0	1.7	246.0	0.108
P4KE200(C)	180.0	220.0	1.0	162.0	5.0	1.5	287.0	0.108
P4KE200(C)A	190.0	210.0	1.0	171.0	5.0	1.53	274.0	0.108
P4KE220(C)	198.0	242.0	1.0	175.0	5.0	1.16	344.0	0.108
P4KE220(C)A	209.0	231.0	1.0	185.0	5.0	1.22	328.0	0.108
P4KE250(C)	225.0	275.0	1.0	202.0	5.0	1.11	360.0	0.110
P4KE250(C)A	237.0	263.0	1.0	214.0	5.0	1.16	344.0	0.110
P4KE300(C)	270.0	330.0	1.0	243.0	5.0	0.93	430.0	0.110
P4KE300(C)A	285.0	315.0	1.0	256.0	5.0	0.97	414.0	0.110
P4KE350(C)	315.0	385.0	1.0	284.0	5.0	0.79	504.0	0.110
P4KE350(C)A	332.0	368.0	1.0	300.0	5.0	0.83	482.0	0.110
P4KE400(C)	360.0	440.0	1.0	324.0	5.0	0.70	574.0	0.110
P4KE400(C)A	380.0	420.0	1.0	342.0	5.0	0.73	548.0	0.110
P4KE440(C)	396.0	484.0	1.0	356.0	5.0	0.64	630.0	0.110
P4KE440(C)A	418.0	462.0	1.0	376.0	5.0	0.67	600.0	0.110
P4KE480(C)	432.0	528.0	1.0	389.0	5.0	0.58	686.0	0.110
P4KE480(C)A	456.0	504.0	1.0	408.0	5.0	0.61	658.0	0.110
P4KE510(C)	459.0	561.0	1.0	413.0	5.0	0.55	729.0	0.110
P4KE510(C)A	485.0	535.0	1.0	434.0	5.0	0.57	698.0	0.110
P4KE540(C)	486.0	594.0	1.0	437.0	5.0	0.52	772.0	0.110
P4KE540(C)A	513.0	567.0	1.0	459.0	5.0	0.54	740.0	0.110

- NOTES :
- V_{BR} MEASURED AFTER I_T APPLIED FOR 300 μS , I_T =SQUARE WAVE PULSE OR EQUIVALENT
 - SURGE CURRENT WAVEFORM PER FIGURE 3 AND DERATED PER FIGUE 2.
 - $V_F = 3.5V$ AT $I_F=25A$ (P4KE6.8(C) THRU P4KE200(C)A)
 $V_F = 6.5V$ AT $I_F=25A$ (P4KE220(C) THRU P4KE540(C)A) ON 1/2 SQUARE OR EQUIVALENT SINE WAVE.
PW = 8.3ms, DUTY CYCLE=4 PULSES PER MINUTE MXIMUM
 - FOR BIPOLAR TYPES HAVING V_{RWM} OF 10 VOLTS AND UNDER, THE I_R LIMIT IS DOUBLED

RATINGS AND CHARACTERISTIC CURVES P4KE6.8(C) THRU P4KE540(C)A

FIG. 1 - PEAK PULSE POWER RATING CURVE

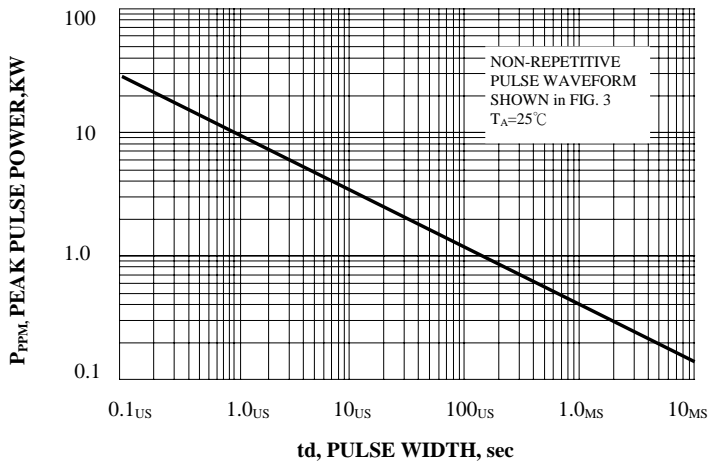


FIG. 2 - PULSE DERATING CURVE

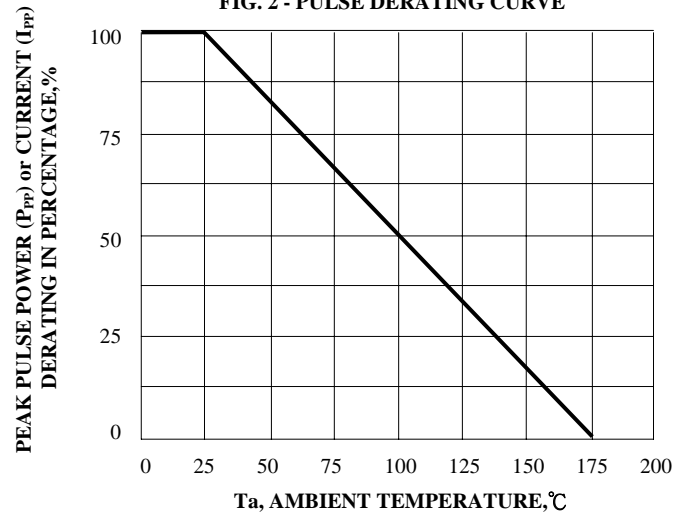


FIG. 3 - PULSE WAVEFORM

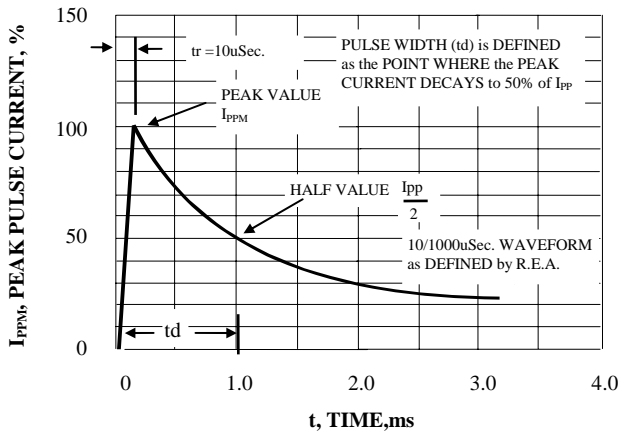


FIG. 4 - TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

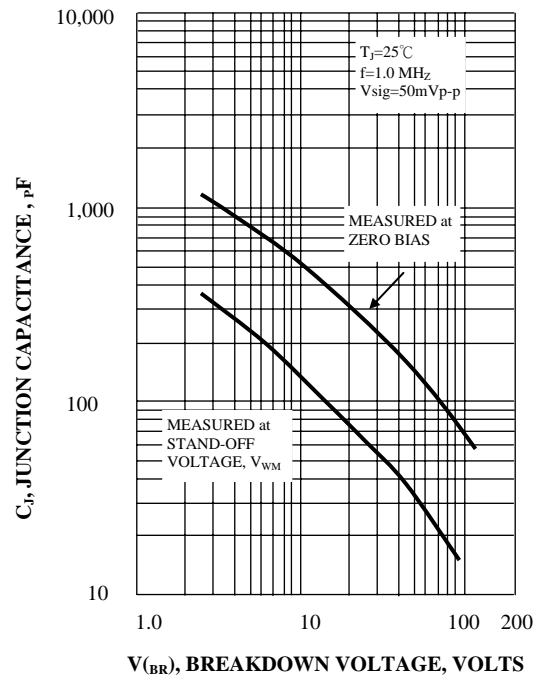


FIG. 5 - STEADY STATE POWER DERATING CURVE

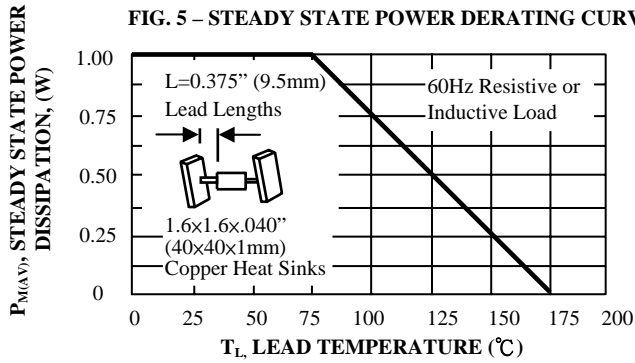


FIG. 7 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL ONLY

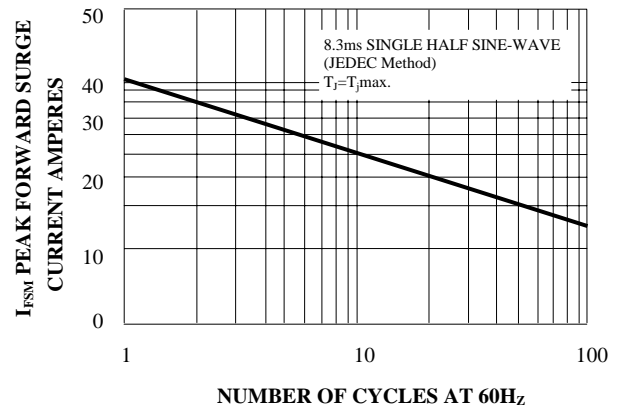


FIG. 6 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

