



CHENMKO ENTERPRISE CO.,LTD

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR
VOLTAGE-6.8 TO 400 VOLTS
400 WATTS PEAK POWER 1.0 WATT STEADY STATE

P4KE
SERIES

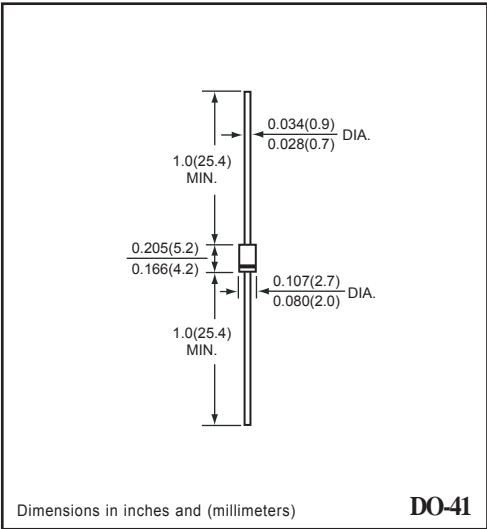
Halogens free devices

FEATURES

- * Plastic package
- * 400W surge capability at 1ms
- * Glass passivated chip junction in DO-41 Package
- * Excellent clamping capability
- * Low Zener Impedance
- * Fast response time: typically less than 1.0ps from 0 volts to BV min.
- * Typical IR less than 1 uA above 10V
- * High temperature soldering guaranteed: 300 degree C/10seconds/.375"(9.5mm) lead length/51 bs., (2.3k) tension

MECHANICAL DATA

Case: JEDEC DO-41 molded plastic
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012 ounce, 0.3 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

DEVICES FOR BIDIRECTIONAL APPLICATIONS

For Bidirectional use C or CA Suffix for types P4KE6.8 thru types P4KE400
 Electrical characteristics apply in both directions.

MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	VALUE	UNITS
Peak Power Dissipation at TA = 25°C, Tp = 1ms (Note1)	PPK	Minimum 400	Watts
Steady State Power Dissipation at TL = 75°C Lead Lengths .375" (9.5mm)	PD	1.0	Watts
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Note 2)	IFSM	40	Amps
Operating and Storage Temperature Range	TJ, TSTG	-65 to +175	°C

NOTES : 1. Non-repetitive current pulse, per Fig. 3 and derated above TA = 25°C per Fig. 2.
 2. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.

2008-6

PRODUCT NO.	Breakdown Voltage			Working Peak Reverse Voltage	Maximum Reverse Leakage at Vrwm	Maximum Reverse Current (NOTE 2)	Maximum Reverse Voltage at Irsm (clamping)	Maximum Temperature Coefficient of Vbr
	VBR Volts (NOTE 1)		@ IT (mA)					
	MIN.	MAX.		Vrwm (V)	Ir (uA)	Irsm (A)	Vrsm (V)	(% C)
P4KE6.8GP	6.12	7.48	10	5.50	1000	38	10.8	0.057
P4KE6.8AGP	6.45	7.14	10	5.80	1000	40	10.5	0.057
P4KE7.5GP	6.75	8.25	10	6.05	500	36	11.7	0.061
P4KE7.5AGP	7.13	7.88	10	6.40	500	37	11.3	0.061
P4KE8.2GP	7.38	9.02	10	6.63	200	33	12.5	0.065
P4KE8.2AGP	7.79	8.61	10	7.02	200	35	12.1	0.065
P4KE9.1GP	8.19	10.0	1.0	7.37	50	30	13.8	0.068
P4KE9.1AGP	8.65	9.55	1.0	7.78	50	31	13.4	0.068
P4KE10GP	9.0	11.0	1.0	8.10	10	28	15.0	0.073
P4KE10AGP	9.5	10.5	1.0	8.55	10	29	14.5	0.073
P4KE11GP	9.9	12.1	1.0	8.92	5.0	26	16.2	0.075
P4KE11AGP	10.5	11.6	1.0	9.40	5.0	27	15.6	0.075
P4KE12GP	10.8	13.2	1.0	9.72	5.0	24	17.3	0.078
P4KE12AGP	11.4	12.6	1.0	10.2	5.0	25	16.7	0.078
P4KE13GP	11.7	14.3	1.0	10.5	5.0	22	19.0	0.081
P4KE13AGP	12.4	13.7	1.0	11.1	5.0	23	18.2	0.081
P4KE15GP	13.5	16.5	1.0	12.1	5.0	19	22.0	0.084
P4KE15AGP	14.3	15.8	1.0	12.8	5.0	20	21.2	0.084
P4KE16GP	14.4	17.6	1.0	12.9	5.0	18	23.5	0.086
P4KE16AGP	15.2	16.8	1.0	13.6	5.0	19	22.5	0.086
P4KE18GP	16.2	19.8	1.0	14.5	5.0	16	26.5	0.088
P4KE18AGP	17.1	18.9	1.0	15.3	5.0	17	25.2	0.088
P4KE20GP	18.0	22.0	1.0	16.2	5.0	14	29.1	0.090
P4KE20AGP	19.0	21.0	1.0	17.1	5.0	15	27.7	0.090
P4KE22GP	19.8	24.2	1.0	17.8	5.0	13	31.9	0.092
P4KE22AGP	20.9	23.1	1.0	18.8	5.0	14	30.6	0.092
P4KE24GP	21.6	26.4	1.0	19.4	5.0	12	34.7	0.094
P4KE24AGP	22.8	25.2	1.0	20.5	5.0	13	33.2	0.094
P4KE27GP	24.3	29.7	1.0	21.8	5.0	11	39.1	0.096
P4KE27AGP	25.7	28.4	1.0	23.1	5.0	11.2	37.5	0.096
P4KE30GP	27.0	33.0	1.0	24.3	5.0	10	43.5	0.097
P4KE30AGP	28.5	31.5	1.0	25.6	5.0	10	41.4	0.097
P4KE33GP	29.7	36.3	1.0	26.8	5.0	9	47.7	0.098
P4KE33AGP	31.4	34.7	1.0	28.2	5.0	9	45.7	0.098
P4KE36GP	32.4	39.6	1.0	29.1	5.0	8	52.0	0.099
P4KE36AGP	34.2	37.8	1.0	30.8	5.0	8.4	49.9	0.099
P4KE39GP	35.1	42.9	1.0	31.6	5.0	7.4	56.4	0.100
P4KE39AGP	37.1	41.0	1.0	33.3	5.0	7.8	53.9	0.100
P4KE43GP	38.7	47.3	1.0	34.8	5.0	6.8	61.9	0.101
P4KE43AGP	40.9	45.2	1.0	36.8	5.0	7.1	59.3	0.101
P4KE47GP	42.3	51.7	1.0	38.1	5.0	6.2	67.8	0.101
P4KE47AGP	44.7	49.4	1.0	40.2	5.0	5.0	64.8	0.101
P4KE51GP	45.9	56.1	1.0	41.3	5.0	5.7	73.5	0.102
P4KE51AGP	48.5	53.6	1.0	43.6	5.0	6.0	70.1	0.102
P4KE56GP	50.4	61.6	1.0	45.4	5.0	5.2	80.5	0.103

PRODUCT NO.	Breakdown Voltage			Working Peak Reverse Voltage	Maximum Reverse Leakage at Vrwm	Maximum Reverse Current (NOTE 2)	Maximum Reverse Voltage at Irsm (clamping)	Maximum Temperature Coefficient of Vbr
	VBR Volts (NOTE 1)		@ IT (mA)					
	MIN.	MAX.		Vrwm (V)	Ir (uA)	Irsm (A)	Vrsm (V)	(%C)
P4KE56AGP	53.2	58.8	1.0	47.8	5.0	5.5	77.0	0.103
P4KE62GP	55.8	68.2	1.0	50.2	5.0	4.7	89.0	0.104
P4KE62AGP	58.9	65.1	1.0	53.0	5.0	5.0	85.0	0.104
P4KE68GP	61.2	74.8	1.0	55.1	5.0	4.3	98.0	0.104
P4KE68AGP	64.6	71.4	1.0	58.0	5.0	4.6	92.0	0.104
P4KE75GP	67.5	82.5	1.0	60.7	5.0	3.9	108	0.105
P4KE75AGP	71.3	78.8	1.0	64.1	5.0	4.1	103	0.105
P4KE82GP	73.8	90.2	1.0	66.4	5.0	3.6	118	0.105
P4KE82AGP	77.9	86.1	1.0	70.1	5.0	3.7	113	0.105
P4KE91GP	81.9	100	1.0	73.7	5.0	3.2	131	0.106
P4KE91AGP	86.5	95.5	1.0	77.8	5.0	3.4	125	0.106
P4KE100GP	90.0	110	1.0	81.0	5.0	2.9	144	0.106
P4KE100AGP	95.0	105	1.0	85.5	5.0	3.1	137	0.106
P4KE110GP	99.0	121	1.0	89.2	5.0	2.7	158	0.107
P4KE110AGP	105	116	1.0	94.0	5.0	2.8	152	0.107
P4KE120GP	108	132	1.0	97.2	5.0	2.4	173	0.107
P4KE120AGP	114	126	1.0	102	5.0	2.5	165	0.107
P4KE130GP	117	143	1.0	105	5.0	2.2	187	0.107
P4KE130AGP	124	137	1.0	111	5.0	2.3	179	0.107
P4KE150GP	135	165	1.0	121	5.0	2.0	215	0.108
P4KE150AGP	143	158	1.0	128	5.0	2.0	207	0.108
P4KE160GP	144	176	1.0	130	5.0	1.8	230	0.108
P4KE160AGP	152	168	1.0	136	5.0	1.9	219	0.108
P4KE170GP	153	187	1.0	138	5.0	1.7	244	0.108
P4KE170AGP	162	179	1.0	145	5.0	1.8	234	0.108
P4KE180GP	162	198	1.0	146	5.0	1.6	258	0.108
P4KE180AGP	171	189	1.0	154	5.0	1.7	246	0.108
P4KE200GP	180	220	1.0	162	5.0	1.5	287	0.108
P4KE200AGP	190	210	1.0	171	5.0	1.53	274	0.108
P4KE220GP	198	242	1.0	175	5.0	1.16	344	0.108
P4KE220AGP	209	231	1.0	185	5.0	1.22	328	0.108
P4KE250GP	225	275	1.0	202	5.0	1.11	360	0.110
P4KE250AGP	237	263	1.0	214	5.0	1.16	344	0.110
P4KE300GP	270	330	1.0	243	5.0	0.93	430	0.110
P4KE300AGP	285	315	1.0	256	5.0	0.97	414	0.110
P4KE350GP	315	385	1.0	284	5.0	0.79	504	0.110
P4KE350AGP	332	368	1.0	300	5.0	0.83	482	0.110
P4KE400GP	360	440	1.0	324	5.0	0.70	574	0.110
P4KE400AGP	380	420	1.0	342	5.0	0.73	548	0.110

- NOTES : 1. Vbr measured after IT applied for 300 us. IT = Square Wave Pulse or equivalent.
2. Surge Current Waveform per Figure 3 and Derated per Figure 2.
3. Vf = 3.5 V max. at If = 25 A (P4KE6.8 thru P4KE91A)
Vf = 5.0 V max. at If = 25 A (P4KE100 thru P4KE400A) on 1/2 Square or equivalent Sine Wave.
PW = 8.3ms, Duty Cycle = 4 Pulses per minute maximum.
4. For Bipolar types having VR of 10 Volts and under, the IR limit is doubled.

RATING CHARACTERISTIC CURVES (P4KE6.8GP ~ P4KE400AGP)

FIG. 1 - PEAK PULSE POWER RATING CURVE

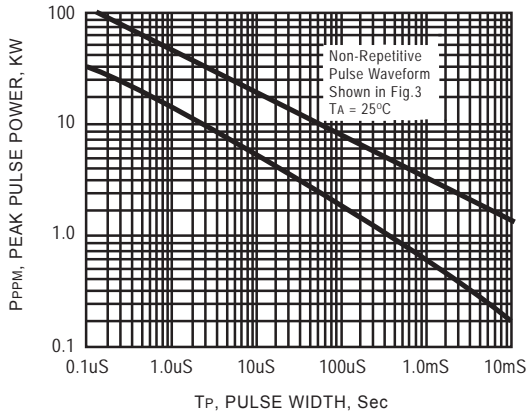


FIG. 2 - PULSE DERATING CURVE

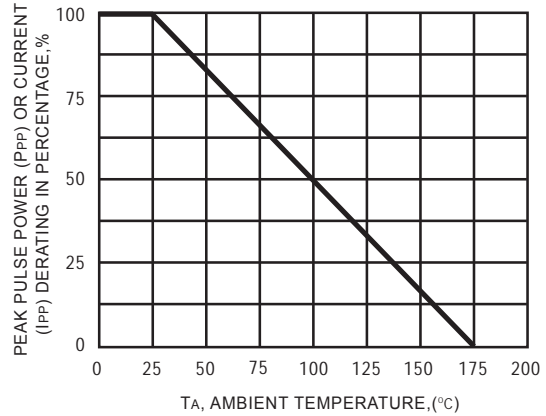


FIG. 3 - PULSE WAVEFORM

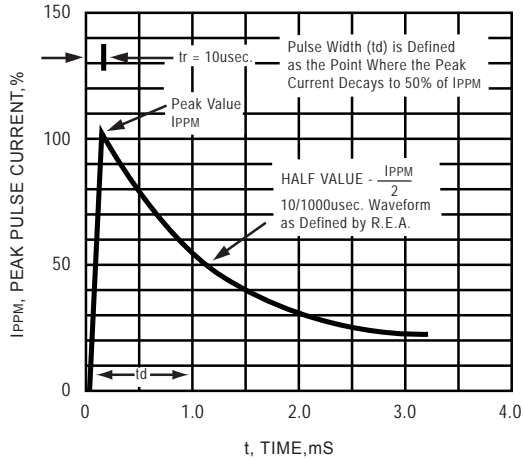
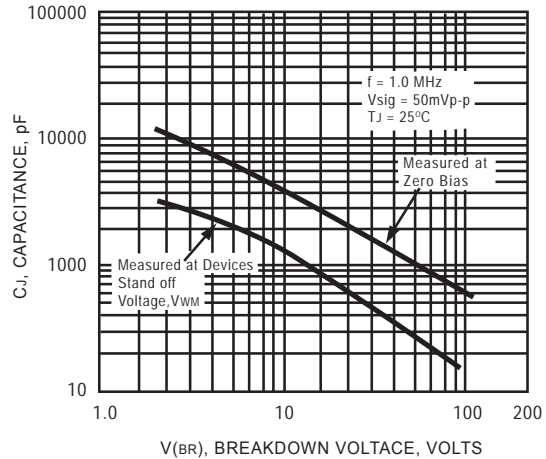


FIG. 4 - TYPICAL JUNCTION CAPACITANCE UNI-DIRECTIONAL



RATING CHARACTERISTIC CURVES (P4KE6.8GP ~ P4KE400AGP)

