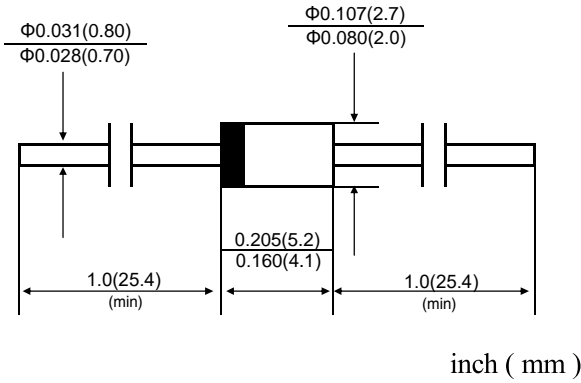


Outline Dimensions and Mark
DO-41



Features

P_{PPM} 400W
V_{BR} 6.8-600V

- 400W Peak pulse power capability at 10/1000µs waveform
- Typical IR less than 1uA above 12V
- High temperature soldering: 260°C/10s
- Meet UL flammability classification 94V-0

Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Max
Peak power dissipation, with a 10/1000us waveform ⁽¹⁾	P _{PPM}	W	400
Peak pulse current, with a 10/1000us waveform ⁽¹⁾	I _{PPM}	A	See Next Table
Power dissipation, on infinite heat sink at T _L =75°C	P _D	W	1.5
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only ⁽²⁾	I _{FSM}	A	40
Operating junction and storage temperature range	T _J , T _{STG}	°C	-55 to +150

Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Maximum instantaneous forward voltage at 25A for unidirectional only ⁽³⁾	V _{FM}	V	3.5/5.0

Notes:

- (1) Non-repetitive current pulse, per Fig. 3 and derated above T_A = 25°C per Fig.2.
- (2) Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.
- (3) V_F=3.5V Max for devices of V_{BR}≤220V, and V_F=5.0V Max for devices of V_{BR}>220V.

P4KE Series 400W Transient Voltage Suppressor

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)



Part Number (Uni)	Part Number (Bi)	Breakdown Voltage $V_{BR}@I_T$			Maximum Reverse Leakage $I_R@V_{WM}$ (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A) ①	Maximum Clamping Voltage $V_C@I_{PP}$ (V)
		Min (V)	Max (V)	I_T (mA)				
P4KE6.8A	P4KE6.8CA	6.45	7.14	10	1000	5.8	38.1	10.5
P4KE7.5A	P4KE7.5CA	7.13	7.88	10	500	6.4	35.4	11.3
P4KE8.2A	P4KE8.2CA	7.79	8.61	10	200	7	33.1	12.1
P4KE9.1A	P4KE9.1CA	8.65	9.55	1	50	7.8	29.9	13.4
P4KE10A	P4KE10CA	9.5	10.5	1	10	8.6	27.6	14.5
P4KE11A	P4KE11CA	10.5	11.6	1	5	9.4	25.6	15.6
P4KE12A	P4KE12CA	11.4	12.6	1	5	10.2	24	16.7
P4KE13A	P4KE13CA	12.4	13.7	1	5	11.1	22	18.2
P4KE15A	P4KE15CA	14.3	15.8	1	1	12.8	18.9	21.2
P4KE16A	P4KE16CA	15.2	16.8	1	1	13.6	17.8	22.5
P4KE18A	P4KE18CA	17.1	18.9	1	1	15.3	15.9	25.2
P4KE20A	P4KE20CA	19	21	1	1	17.1	14.4	27.7
P4KE22A	P4KE22CA	20.9	23.1	1	1	18.8	13.1	30.6
P4KE24A	P4KE24CA	22.8	25.2	1	1	20.5	12	33.2
P4KE27A	P4KE27CA	25.7	28.4	1	1	23.1	10.7	37.5
P4KE30A	P4KE30CA	28.5	31.5	1	1	25.6	9.7	41.4
P4KE33A	P4KE33CA	31.4	34.7	1	1	28.2	8.8	45.7
P4KE36A	P4KE36CA	34.2	37.8	1	1	30.8	8	49.9
P4KE39A	P4KE39CA	37.1	41	1	1	33.3	7.4	53.9
P4KE43A	P4KE43CA	40.9	45.2	1	1	36.8	6.7	59.3
P4KE47A	P4KE47CA	44.7	49.4	1	1	40.2	6.2	64.8
P4KE51A	P4KE51CA	48.5	53.6	1	1	43.6	5.7	70.1
P4KE56A	P4KE56CA	53.2	58.8	1	1	47.8	5.2	77
P4KE62A	P4KE62CA	58.9	65.1	1	1	53	4.7	85
P4KE68A	P4KE68CA	64.6	71.4	1	1	58.1	4.3	92
P4KE75A	P4KE75CA	71.3	78.8	1	1	64.1	3.9	103.0
P4KE82A	P4KE82CA	77.9	86.1	1	1	70.1	3.5	113
P4KE91A	P4KE91CA	86.5	95.5	1	1	77.8	3.2	125
P4KE100A	P4KE100CA	95	105	1	1	85.5	2.9	137
P4KE110A	P4KE110CA	105	116	1	1	94	2.6	152
P4KE120A	P4KE120CA	114	126	1	1	102	2.4	165
P4KE130A	P4KE130CA	124	137	1	1	111	2.3	179
P4KE150A	P4KE150CA	143	158	1	1	128	1.9	207
P4KE160A	P4KE160CA	152	168	1	1	136	1.8	219

P4KE Series 400W Transient Voltage Suppressor
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

Part Number (Uni)	Part Number (Bi)	Breakdown Voltage $V_{BR}@I_T$			Maximum Reverse Leakage $I_R @$ V_{WM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage V_C @ I_{PP} (V)
		Min (V)	Max (V)	I_T (mA)				
P4KE170A	P4KE170CA	162	179	1	1	145	1.7	234
P4KE180A	P4KE180CA	171	189	1	1	154	1.6	246
P4KE200A	P4KE200CA	190	210	1	1	171	1.5	274
P4KE220A	P4KE220CA	209	231	1	1	185	1.2	328
P4KE250A	P4KE250CA	237	263	1	1	214	1.2	344
P4KE300A	P4KE300CA	285	315	1	1	256	1	414
P4KE350A	P4KE350CA	333	368	1	1	300	0.83	482
P4KE400A	P4KE400CA	380	420	1	1	342	0.73	548
P4KE440A	P4KE440CA	418	462	1	1	376	0.66	602
P4KE500A	P4KE500CA	475	525	1	1	427.5	0.58	690
P4KE520A	P4KE520CA	494	546	1	1	444.6	0.56	717.6
P4KE550A	P4KE550CA	523	577	1	1	470.3	0.53	759
P4KE600A	P4KE600CA	570	630	1	1	513	0.48	828

① Surge waveform: 10/1000 μs

V_{RWM} : Stand-off voltage -- maximum voltage that can be applied

V_{BR} : Breakdown voltage

V_C : Clamping voltage -- peak voltage measured across the suppressor at a specified I_{PP}

I_R : Reverse leakage current

■ Characteristics(Typical)

FIG1: Peak Pulse Power Rating Curve

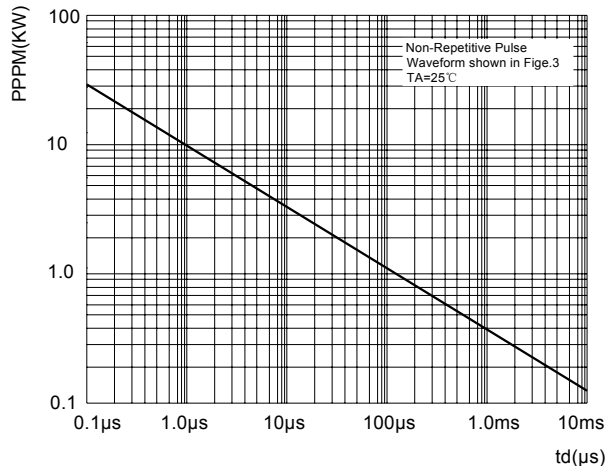


FIG2: Pulse Power or Current vs. Initial Junction Temperature

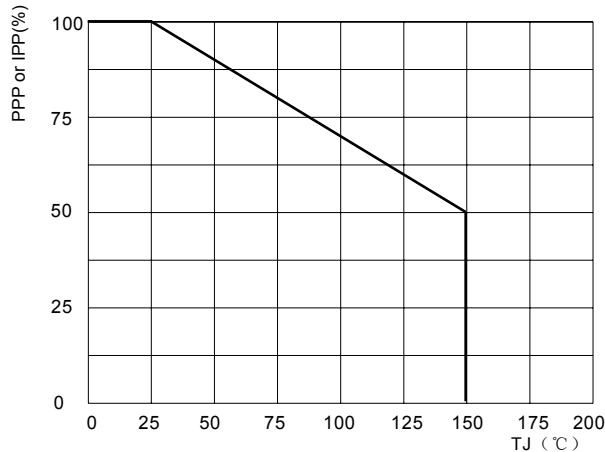


FIG3: Pulse Waveform

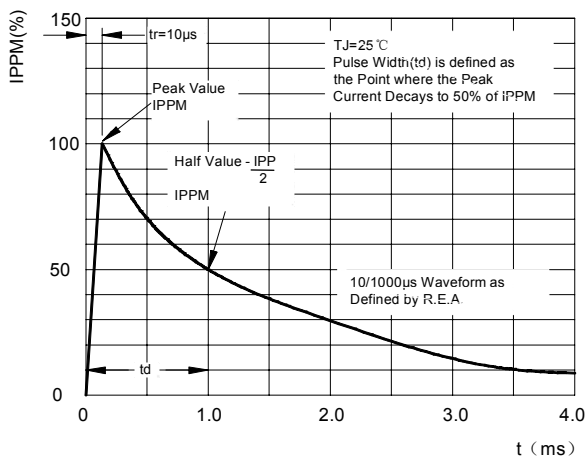


FIG4: Power Derating Curve

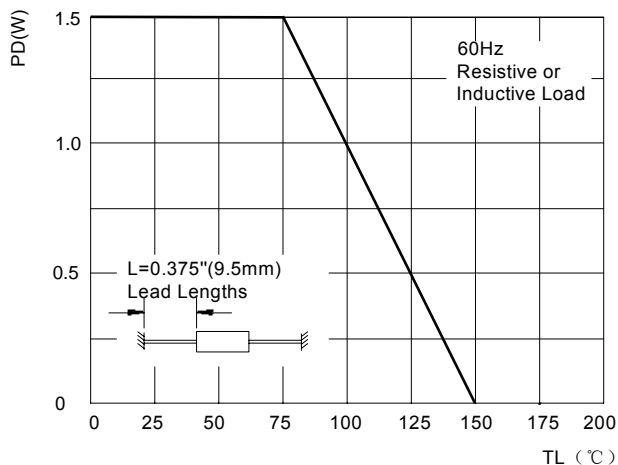
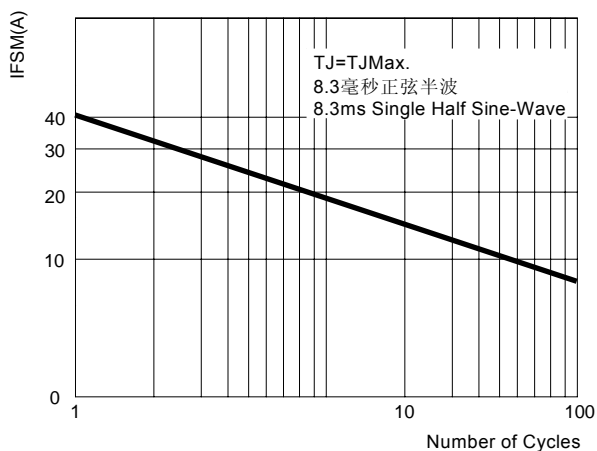


FIG5: Maximum Non-Repetitive Surge Current



The curve above is for reference only.

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