

P4KE SERIES

Transient Voltage Suppressor Rectifier

Features

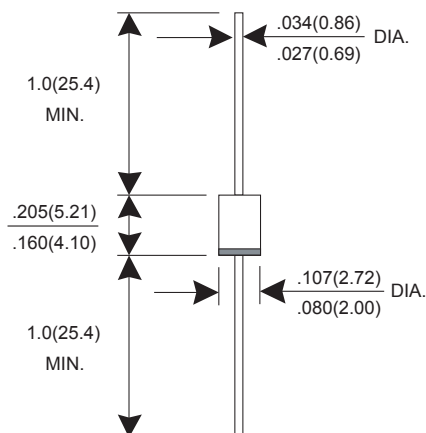
- ★ Glass passivated chip
- ★ Low profile package
- ★ 400W peak pulse power capability at 10/1000 us waveform, repetition rate (duty cycle): 0.01%
- ★ Low leakage
- ★ Excellent clamping capability
- ★ Fast response time
- ★ RoHS compliant

Mechanical Data

- ★ Case: DO-41, Molded plastic has UL flammability classification 94V-0
- ★ Terminal: Solder plated, solderable per MIL-STD-202, Method 208
- ★ Polarity: Cathode band denotes uni-directional device except bi-directional device
- ★ Weight: 0.34 gram

Working Voltage 5.8 to 171 V
Power Dissipation 400 Watts

DO-41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

T_A= 25°C unless otherwise noted

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power Dissipation at T _A =25°C by 10/1000us waveform fig.1 (Note 1,2)	PPPM	400	Watts
Peak Forward Surge Current, 8.3ms single Half sine-wave super imposed on rated load (Note 3)	I _{FSM}	40	A
Steady State Power Dissipation at T _L =75°C	P _D	1.5	Watts
Maximum Instantaneous forward voltage at 25A for unidirectional devices only (Note 4)	V _F	3.5 / 5.0	V
Typical Thermal Resistance Junction to Ambient	R _{θJA}	100	°C/W
Typical Thermal Resistance Junction to Lead	R _{θJL}	60	°C/W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +175	°C

NOTES : (1) Non-repetitive current pulse, per fig. 3 and derated above T_A=25 °C per fig. 2.
 (2) Mounted on 40 x 40 x 1.0 mm copper pads to each terminal
 (3) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle= 4 pulses per minute maximum
 (4) V_F<3.5V for V_{BR}≤ 200V and V_F<5.0V for V_{BR}≥ 201V

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Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Breakdown Voltage $V_{BR}@I_T$			Maximum Reverse Leakage I_R @ V_{RWM} (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)	$I_T(\text{mA})$				
P4KE6.8A	P4KE6.8CA	6.46	7.14	10	1000	5.8	38.10	10.5
P4KE7.5A	P4KE7.5CA	7.13	7.88	10	500	6.4	35.40	11.3
P4KE8.2A	P4KE8.2CA	7.79	8.61	10	200	7.0	33.06	12.1
P4KE9.1A	P4KE9.1CA	8.65	9.56	1	50	7.8	29.85	13.4
P4KE10A	P4KE10CA	9.50	10.50	1	10	8.6	27.59	14.5
P4KE11A	P4KE11CA	10.45	11.55	1	5	9.4	25.64	15.6
P4KE12A	P4KE12CA	11.40	12.60	1	5	10.2	23.95	16.7
P4KE13A	P4KE13CA	12.35	13.65	1	1	11.1	21.98	18.2
P4KE15A	P4KE15CA	14.25	15.75	1	1	12.8	18.87	21.2
P4KE16A	P4KE16CA	15.20	16.80	1	1	13.6	17.78	22.5
P4KE18A	P4KE18CA	17.10	18.90	1	1	15.3	15.87	25.2
P4KE20A	P4KE20CA	19.00	21.00	1	1	17.1	14.44	27.7
P4KE22A	P4KE22CA	20.90	23.10	1	1	18.8	13.07	30.6
P4KE24A	P4KE24CA	22.80	25.20	1	1	20.5	12.05	33.2
P4KE27A	P4KE27CA	25.65	28.35	1	1	23.1	10.67	37.5
P4KE30A	P4KE30CA	28.50	31.50	1	1	25.6	9.66	41.4
P4KE33A	P4KE33CA	31.35	34.65	1	1	28.2	8.75	45.7
P4KE36A	P4KE36CA	34.20	37.80	1	1	30.8	8.02	49.9
P4KE39A	P4KE39CA	37.05	40.95	1	1	33.3	7.42	53.9
P4KE43A	P4KE43CA	40.85	45.15	1	1	36.8	6.75	59.3
P4KE47A	P4KE47CA	44.65	49.35	1	1	40.2	6.17	64.8
P4KE51A	P4KE51CA	48.45	53.55	1	1	43.6	5.71	70.1
P4KE56A	P4KE56CA	53.20	58.80	1	1	47.8	5.19	77.0
P4KE62A	P4KE62CA	58.90	65.10	1	1	53.0	4.71	85.0
P4KE68A	P4KE68CA	64.60	71.40	1	1	58.1	4.35	92.0
P4KE75A	P4KE75CA	71.25	78.75	1	1	64.1	3.88	103.0
P4KE82A	P4KE82CA	77.90	86.10	1	1	70.1	3.54	113.0
P4KE91A	P4KE91CA	86.45	95.55	1	1	77.8	3.20	125.0
P4KE100A	P4KE100CA	95.00	105.00	1	1	85.5	2.92	137.0
P4KE1								

RATINGS AND CHARACTERISTIC CURVES P4KE SERIES

FIG.1 - PULSE RATING CURVE

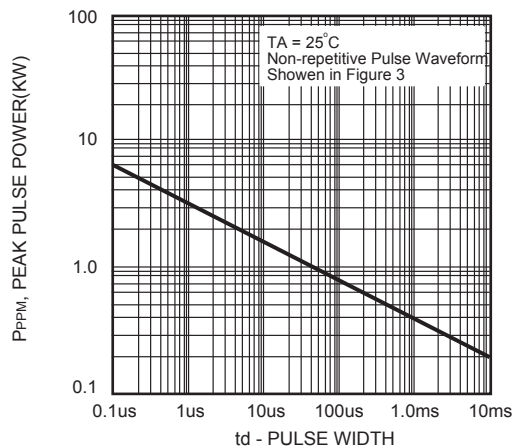


FIG.2 - PULSE DERATING CURVE

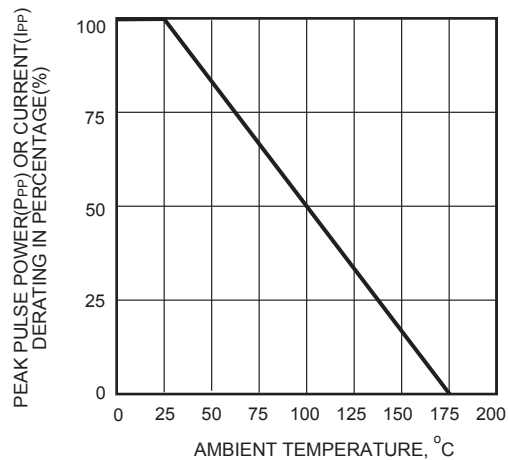


FIG.3 - PULSE WAVEFORM

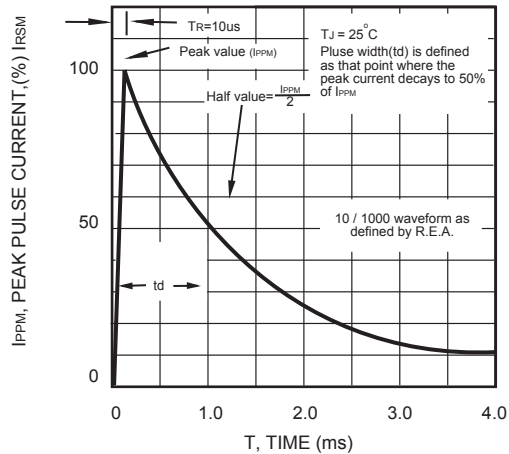


FIG.4 - TYPICAL JUNCTION CAPACITANCE

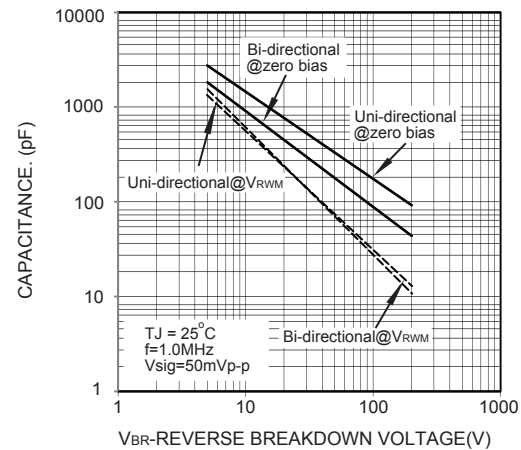


FIG.5 - STEADY STATE POWER DERATING CURVE

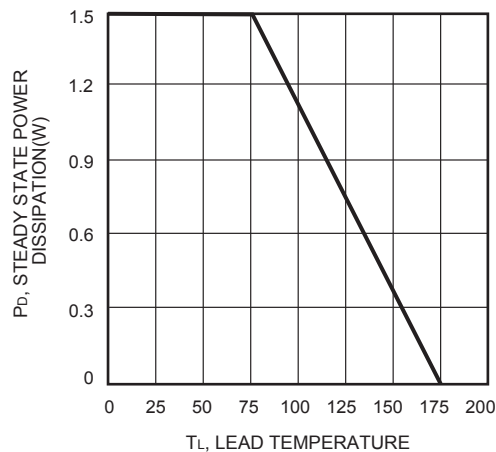


FIG.6 - MAXIMUM NON-REPETITIVE SURGE CURRENT

