

Unidirectional And Bidirectional Transient Voltage Suppressor



Features:

- Low leakage
- Uni and Bi-Directional unit
- Excellent clamping capability
- Plastic material has UL recognition 94V-0
- Fast response time

Mechanical Data:

Case	: Molded Plastic
Polarity	: Uni-Directional -type number and cathode band Bi-Directional-type number only
Weight	: 0.34 grams
Reverse Voltage	: 6.8 to 400 Volts
Power Dissipation	: 400 Watts

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Characteristics	Symbol	Value	Unit
Peak Power Dissipation at $T_A = 25^\circ\text{C}$ TP = 1ms (Note 1)	P_{PK}	Min. 400	Watts
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	40	Amps
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ Lead Lengths 0.375"(9.5mm), See Fig. 4	$P_{M(AV)}$	1	Watts
Max. Instantaneous Forward Voltage at 25A for Uni-Directional Devices only (Note 2)	V_F	See Note 3	Volts
Operating Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +175	$^\circ\text{C}$

Notes:

1. Non-repetitive current pulse, per Fig. 5 and derated above $T_A = 25^\circ\text{C}$ per Fig. 1.
2. 8.3ms single half-wave duty cycle = 4 pulses per minutes maximum (uni-directional units only).
3. $V_F = 3.5\text{V}$ on P6KE6.8 thru P6KE200A devices.

Part Number		Reverse Standoff Voltage	Breakdown Voltage BV Volts@It			Max. Reverse Leakage	Max. Clamping Voltage	Max. Peak Pulse	Max. Voltage Temp. Variation
(UNI)	(BI)	VR(V)	Min.(V)	Max.(V)	It(mA)	IR(μA)	Vc(V)	Ipp(A)	mV/ $^\circ\text{C}$
P4KE18A	-	15.3	17.1	18.9	1	5	25.2	17	0.088
-	P4KE30CA	25.6	28.5	31.5	1	5	41.4	10	0.097
P4KE33A	-	28.2	31.4	34.7	1	5	45.7	9	0.098

Notes: Suffix 'C' denotes bidirectional device . Suffix 'A' denotes 5% tolerance device .no suffix denotes 10% tolerance device

1. For bidirectional devices having VR of 10Volts and under ,the IR limit is doubled

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Ratings and Characteristic Curves

FIG.1-PULSE DERATING CURVE

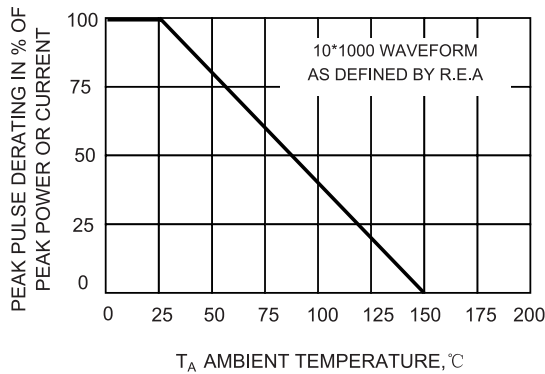


FIG.2-TYPICAL JUNCTION CAPACITANCE

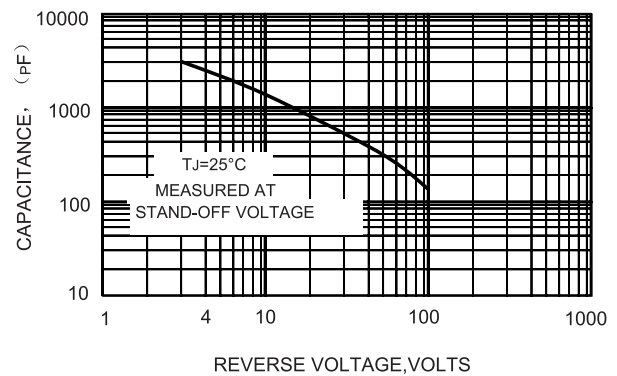


FIG.3-PULSE RATING CURVE

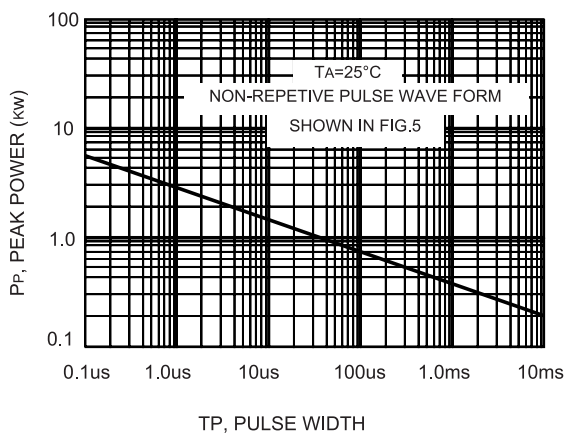


FIG.4-STEADY STATE POWER DERATING CURVE

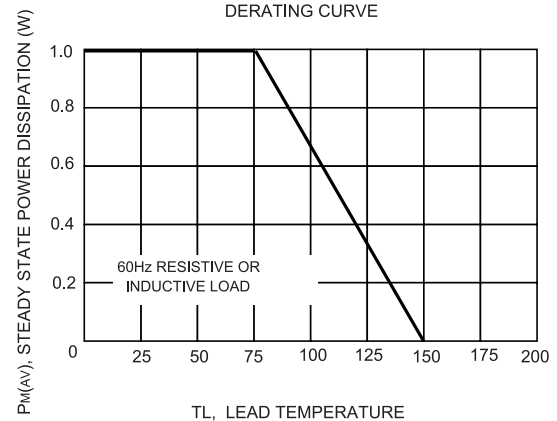
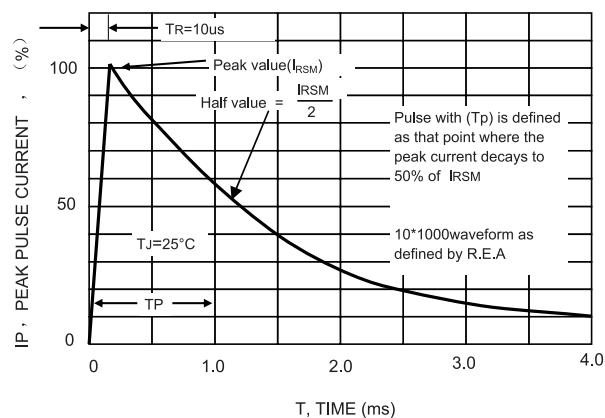


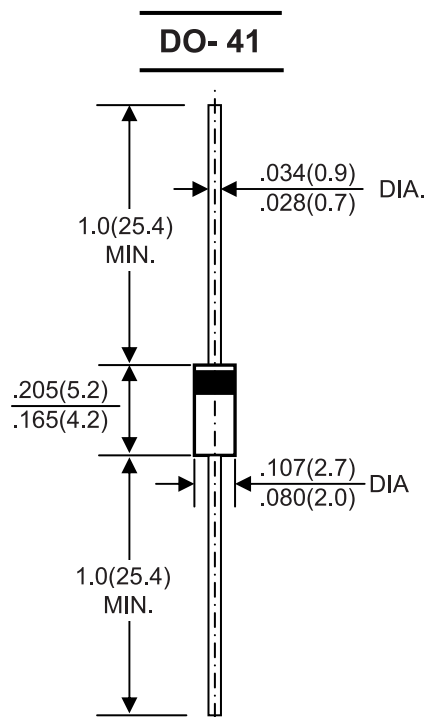
FIG.5-PULSE WAVEFORM



Unidirectional And Bidirectional Transient Voltage Suppressor



Dimensions:



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Unidirectional And Bidirectional Transient Voltage Suppressors	P4KE18A
	P4KE30CA
	P4KE33A

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