

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	: Colour band denotes cathode except in Bi-Directional
Weight	: 0.4 grams
Reverse Voltage	: 6.8 to 600 Volts
Power Dissipation	: 600 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	Values	Unit
Peak Power Dissipation at $T_A = 25^\circ\text{C}$ TP = 1ms (Note 1)	P_{PK}	Min. 600	Watts
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	100	Amps
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ Lead Lengths 0.375"(9.5mm)	$P_{M(AV)}$	5	Watts
Maximum Instantaneous Forward Voltage at 50A 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/ $^\circ\text{C}$
-	P6KE12CA+	10.2	11.4	12.6	1	5	16.7	36	0.078
P6KE13A+	-	11.1	12.4	13.7	1	5	18.2	33	0.081
P6KE150A+	-	128	143	158	1	5	207	2.9	0.108

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(UNI)	(BI)	VR(V)	Min.(V)	Max.(V)	It(mA)	IR(μA)	Vc(V)	Ipp(A)	mV/°C
-	P6KE15CA+	12.8	14.3	15.8	1	5	21.2	28	0.084
P6KE16A+	P6KE16CA+	13.6	15.2	16.8	1	5	22.5	27	0.086
P6KE180A+	P6KE180CA+	154	171	189	1	5	246	2.4	0.108
P6KE18A+	P6KE18CA+	15.3	17.1	18.9	1	5	25.2	24	0.088
P6KE20A+	-	17.1	19	21	1	5	27.7	22	0.09
P6KE22A+	-	18.8	20.9	23.1	1	5	30.6	20	0.092
-	P6KE24CA+	20.5	22.8	25.2	1	5	33.2	18	0.094
P6KE30A+	P6KE30CA+	25.6	28.5	31.5	1	5	41.4	14.4	0.097
P6KE33A+	-	28.2	31.4	34.7	1	5	45.7	13.2	0.098
-	P6KE36CA+	30.8	34.2	37.8	1	5	49.9	12	0.099
P6KE39A+	P6KE39CA+	33.3	37.1	41	1	5	53.9	11.2	0.1
P6KE62A+	-	53	58.9	65.1	1	5	85	7.1	0.104
P6KE7.5A+	-	6.4	7.13	7.88	10	500	11.3	53	0.061
-	P6KE8.2CA+	7.02	7.79	8.61	10	200	12.1	50	0.065
-	P6KE9.1CA+	7.78	8.65	9.55	1	50	13.4	45	0.068
-	P6KE200CA+	171	190	210	1	5	274	2.2	0.108

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

Ratings and Characteristic Curves

FIG.1-PULSE DERATING CURVE

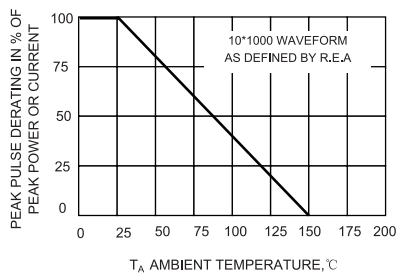


FIG.2-TYPICAL JUNCTION CAPACITANCE

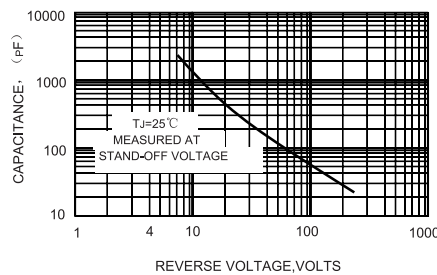


FIG.3-PULSE RATING CURVE

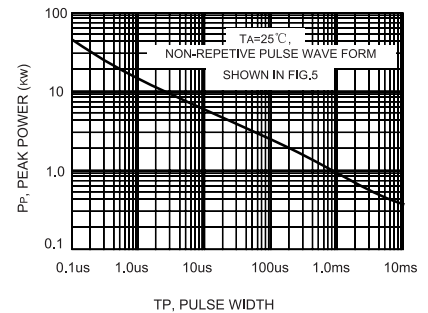


FIG.4-STEADY STATE POWER DERATING CURVE

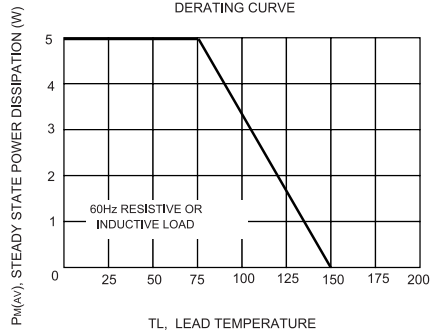
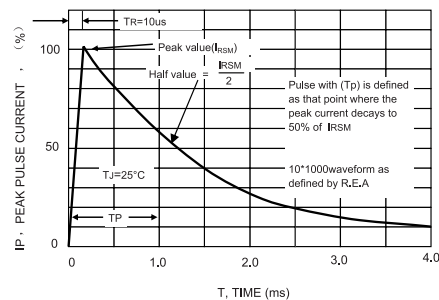
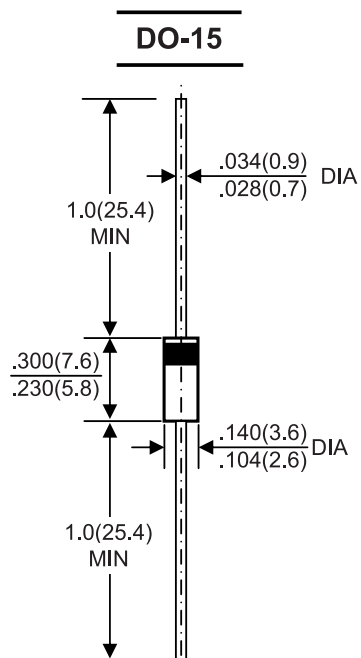


FIG.5-PULSE WAVEFORM



Transient Voltage Suppressor

Dimensions:



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Unidirectional And Bidirectional Transient Voltage Suppressors	P6KE12CA+
	P6KE13A+
	P6KE150A+
	P6KE15CA+
	P6KE16A+
	P6KE16CA+
	P6KE180A+
	P6KE180CA+
	P6KE18A+
	P6KE18CA+
	P6KE200CA+
	P6KE20A+

Description	Part Number
Unidirectional And Bidirectional Transient Voltage Suppressors	P6KE22A+
	P6KE24CA+
	P6KE30A+
	P6KE30CA+
	P6KE33A+
	P6KE36CA+
	P6KE39A+
	P6KE39CA+
	P6KE62A+
	P6KE7.5A+
	P6KE8.2CA+
	P6KE9.1CA+

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