

FEATURES

- * 600 Watts Surge Capability at 1ms
- * Excellent clamping capability
- * Low zener impedance
- * Fast response time: Typically less than 1.0ps from 0 volt to BV min.
- * Typical I_R less than $1\mu A$ above 10V
- * High temperature soldering guaranteed: $260^\circ C$ / 10 seconds / .375"(9.5mm) lead length, 5lbs.(2.3kg) tension

MECHANICAL DATA

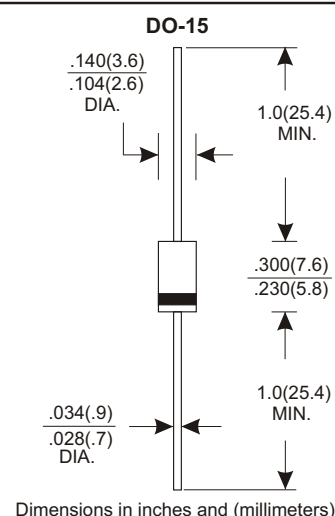
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.40 grams

VOLTAGE RANGE

6.8 to 440 Volts

600 Watts Peak Power

5.0 Watts Steady State



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating $25^\circ C$ ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATINGS	SYMBOL	VALUE	UNITS
Peak Power Dissipation at $T_A=25^\circ C$, $T_P=1ms$ (NOTE 1)	P_{PK}	Minimum 600	Watts
Steady State Power Dissipation at $T_L=75^\circ C$	P_D	5.0	Watts
Lead Length .375"(9.5mm) (NOTE 2)			
Peak Forward Surge Current at 8.3ms Single Half Sine-Wave superimposed on rated load (JEDEC method) (NOTE 3)	I_{FSM}	100	Amps
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +175	$^\circ C$

NOTES:

1. Non-repetitive current pulse per Fig. 3 and derated above $T_A=25^\circ C$ per Fig. 2.
2. Mounted on Copper Pad area of 1.6" X 1.6" (40mm X 40mm) per Fig.5.
3. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.

DEVICES FOR BIPOLAR APPLICATIONS

1. For Bidirectional use C or CA Suffix for types P6KE6.8 thru P6KE440.
2. Electrical characteristics apply in both directions.

RATING AND CHARACTERISTIC CURVES (P6KE SERIES)

FIG.1-PEAK PULSE POWER DERATING CURVE

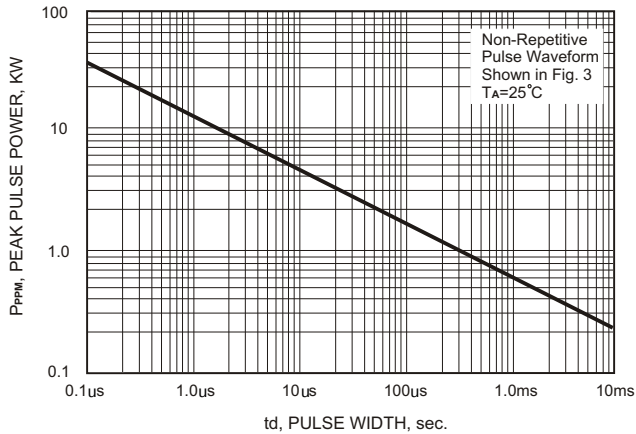


FIG.2-PULSE DERATING CURVE

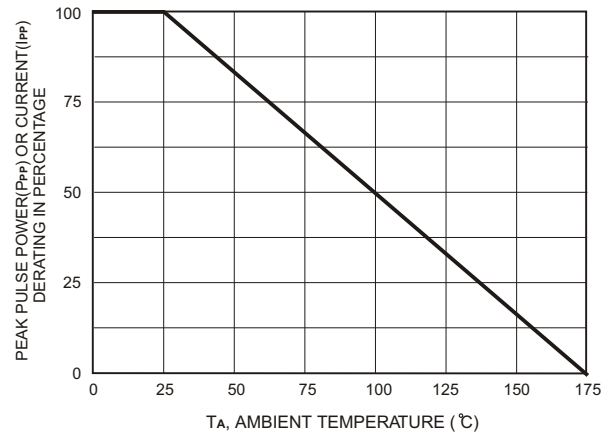


FIG.3-PULSE WAVE FORM

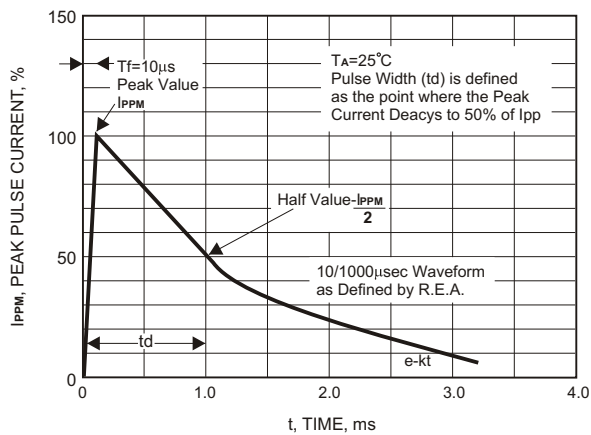


FIG.4-TYPICAL JUNCTION CAPACITANCE

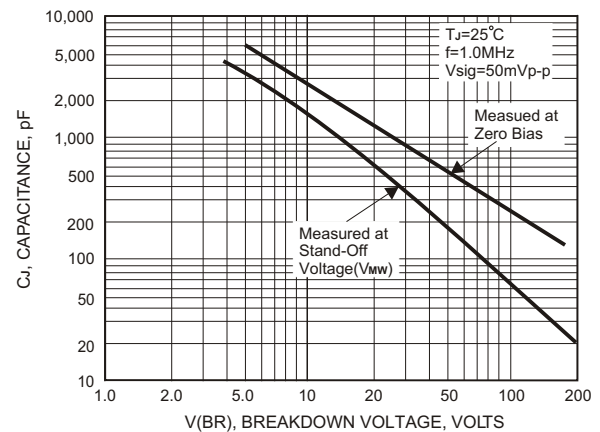


FIG.5-STEADY STATE POWER DERATING CURVE

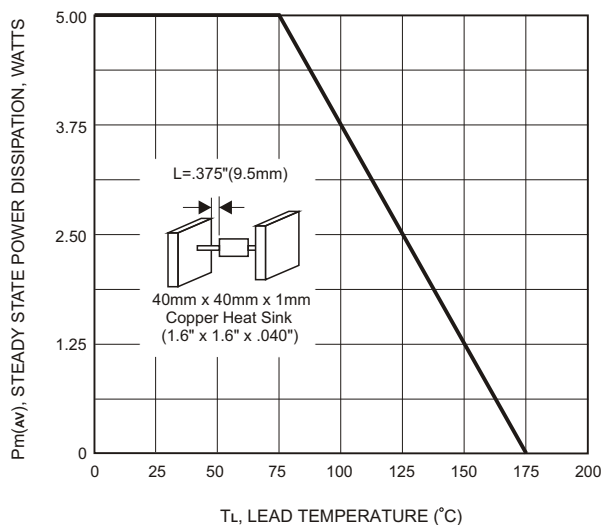
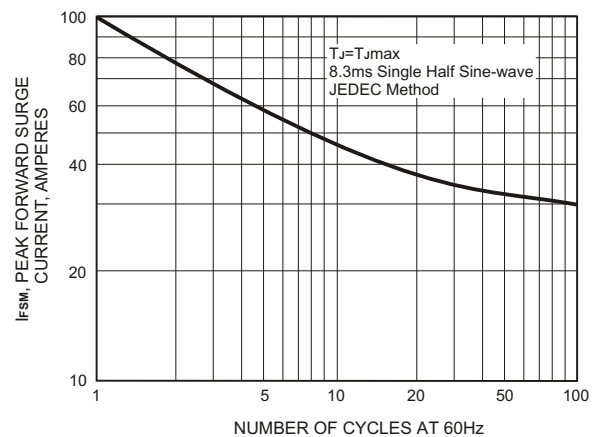


FIG.6-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT, UNIDIRECTIONAL



600 Watt Axial Lead TVS

UNI DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VRB (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ VRWM IR(μA)
P6KE6.8(C)A	5.80	6.45	7.14	10	10.5	57.0	1000
P6KE7.5(C)A	6.40	7.13	7.88	10	11.3	53.0	500
P6KE8.2(C)A	7.02	7.79	8.61	10	12.1	50.0	200
P6KE9.1(C)A	7.78	8.65	9.50	1	13.4	45.0	50
P6KE10(C)A	8.55	9.50	10.50	1	14.5	41.0	10
P6KE11(C)A	9.40	10.50	11.60	1	15.6	38.0	5
P6KE12(C)A	10.20	11.40	12.60	1	16.7	36.0	5
P6KE13(C)A	11.10	12.40	13.70	1	18.2	33.0	5
P6KE15(C)A	12.80	14.30	15.80	1	21.2	28.0	5
P6KE16(C)A	13.60	15.20	16.80	1	22.5	27.0	5
P6KE18(C)A	15.30	17.10	18.90	1	25.2	24.0	5
P6KE20(C)A	17.10	19.00	21.00	1	27.7	22.0	5
P6KE22(C)A	18.80	20.90	23.10	1	30.6	20.0	5
P6KE24(C)A	20.50	22.80	25.20	1	33.2	18.0	5
P6KE27(C)A	23.10	25.70	28.40	1	37.5	16.0	5
P6KE30(C)A	25.60	28.50	31.50	1	41.4	14.4	5
P6KE33(C)A	28.20	31.40	34.70	1	45.7	13.2	5
P6KE36(C)A	30.80	34.20	37.80	1	49.9	12.0	5
P6KE39(C)A	33.30	37.10	41.00	1	53.9	11.2	5
P6KE43(C)A	36.80	40.90	45.20	1	59.3	10.1	5
P6KE47(C)A	40.20	44.70	49.40	1	64.8	9.3	5
P6KE51(C)A	43.60	48.50	53.60	1	70.1	8.6	5
P6KE56(C)A	47.80	53.20	58.80	1	77.0	7.8	5
P6KE62(C)A	53.00	58.90	65.10	1	85.0	7.1	5
P6KE68(C)A	58.10	64.60	71.40	1	92.0	6.5	5
P6KE75(C)A	64.10	71.30	78.80	1	103.0	5.8	5

600 Watt Axial Lead TVS

UNI DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VRB (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ VRWM IR(μA)
P6KE82(C)A	70.10	77.90	86.10	1	113.0	5.4	5
P6KE91(C)A	77.80	86.50	95.50	1	125.0	4.9	5
P6KE100(C)A	85.50	95.00	105.00	1	137.0	4.5	5
P6KE110(C)A	94.00	105.00	116.00	1	152.0	4.0	5
P6KE120(C)A	102.00	114.00	126.00	1	165.0	3.7	5
P6KE130(C)A	111.00	124.00	137.00	1	179.0	3.4	5
P6KE150(C)A	128.00	143.00	158.00	1	207.0	2.9	5
P6KE160(C)A	136.00	152.00	168.00	1	219.0	2.8	5
P6KE170(C)A	145.00	162.00	179.00	1	234.0	2.6	5
P6KE180(C)A	154.00	171.00	189.00	1	246.0	2.5	5
P6KE200(C)A	171.00	190.00	210.00	1	274.0	2.2	5
P6KE220(C)A	185.00	209.00	231.00	1	328.0	1.9	5
P6KE250(C)A	214.00	237.00	263.00	1	344.0	1.8	5
P6KE300(C)A	256.00	285.00	315.00	1	414.0	1.5	5
P6KE350(C)A	300.00	332.00	368.00	1	482.0	1.3	5
P6KE400(C)A	342.00	380.00	420.00	1	548.0	1.1	5
P6KE440(C)A	376.00	418.00	462.00	1	600.0	1.0	5