



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 μA above 10V
- * High temperature soldering guaranteed: 260 C / 10 seconds / .375"(9.5mm) lead length, 5lbs.(2.3kg) tension

Mechanical Data

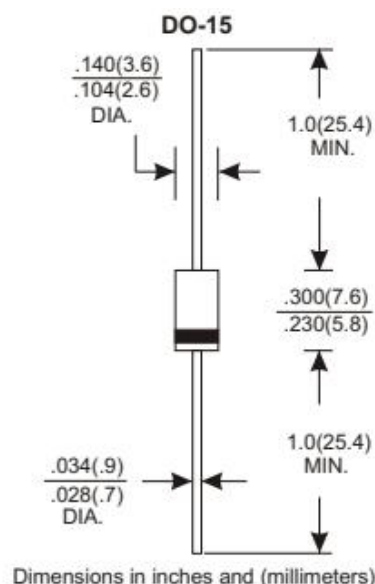
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.40 grams

VOLTAGE RANGE

6.8 to 440 Volts

600 Watts Peak Power

5.0 Watts Steady State



Maximum Ratings And Electrical Characteristics

Rating 25 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 $T_A=25\text{ C}$, $T_P=1\text{ms}$ (NOTE 1)	P_{PK}	Minimum 600	Watts
Steady State Power Dissipation at $T_L=75\text{ C}$ Lead Length .375"(9.5mm) (NOTE 2)	P_D	5.0	Watts
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	C

NOTES:

1. Non-repetitive current pulse per Fig. 3 and derated above $T_A=25\text{ C}$ per Fig. 2
2. Mounting on Copper Pad area of 1.65X1.65" (40X40mm) 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
2. Electrical characteristics apply in both directions.

RATING AND CHARACTERISTIC CURVES (P6KE SERIES)

FIG.1-PEAK PULSE POWER DERATING CURVE

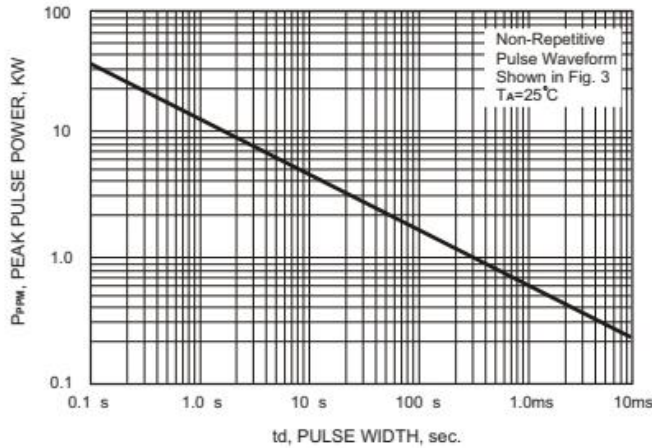


FIG.2-PULSE DERATING CURVE

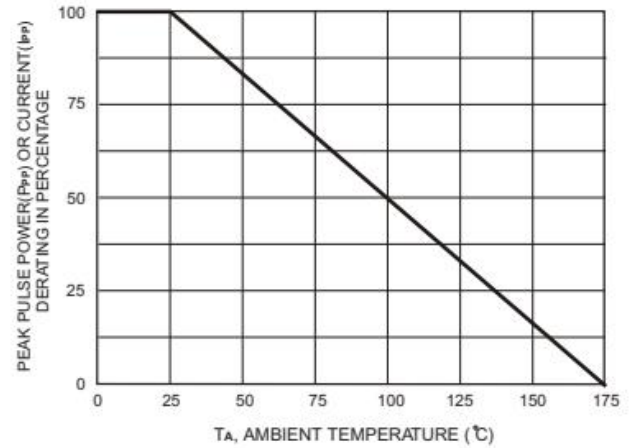


FIG.3-PULSE WAVE FORM

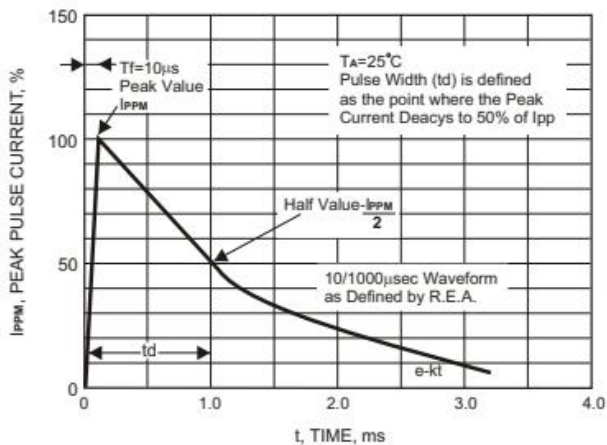


FIG.4-TYPICAL JUNCTION CAPACITANCE

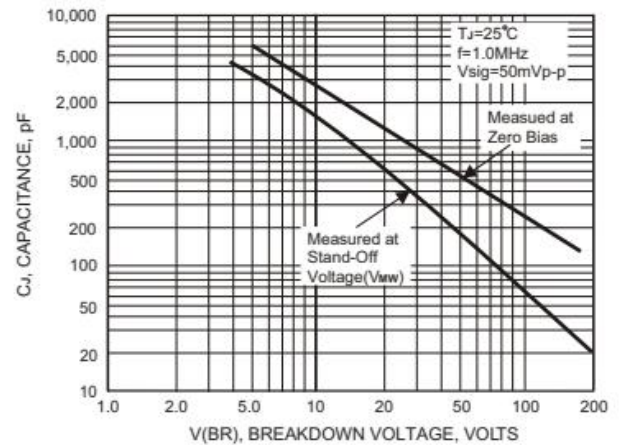


FIG.5-STEADY STATE POWER DERATING CURVE

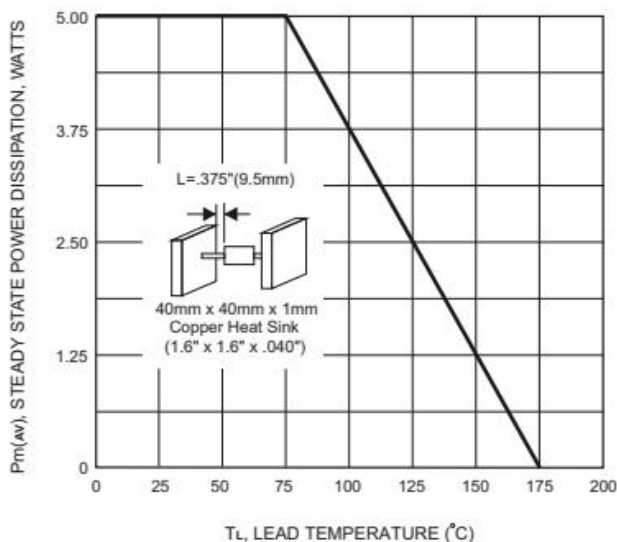
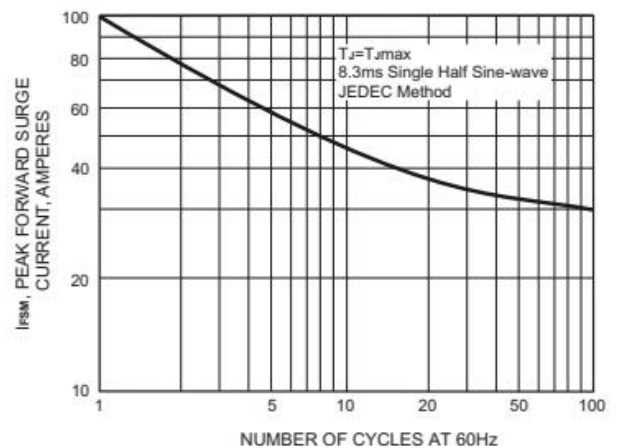


FIG.6-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT, UNIDIRECTIONAL



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	8.619	10	12.1	50.0	200
P6KE9.1(C)A	7.78	8.65	.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.	11.60	1	15.6	38.0	5
P6KE12(C)A	10.	5011.	12.60	1	16.7	36.0	5
P6KE13(C)A	2011.	4012.	13.70	1	18.2	33.0	5
P6KE15(C)A	12.8 ¹⁰	14.3 ⁴⁰	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.	22.80	25.20	1	33.2	18.0	5
P6KE27(C)A	5023.	25.70	28.40	1	37.5	16.0	5
P6KE30(C)A	1025.	28.50	31.50	1	41.4	14.4	5
P6KE33(C)A	6028.	31.40	34.70	1	45.7	13.2	5
P6KE36(C)A	2030.	34.20	37.80	1	49.9	12.0	5
P6KE39(C)A	8033.	37.10	41.00	1	53.9	11.2	5
P6KE43(C)A	3036.	40.90	45.20	1	59.3	10.1	5
P6KE47(C)A	40.2 ⁸⁰	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	7.87	5
P6KE62(C)A	53.00	58.90	65.10	1	85.0	.16.	5
P6KE68(C)A	58.10	64.60	71.40	1	92.0	55.8	5
P6KE75(C)A	64.10	71.30	78.80	1	103.0		5

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	4.94	5
P6KE100(C)A	85.50	95.00	105.	11	137.0	.54.	5
P6KE110(C)A	94.00	105.00	00116.		152.0	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	3.42	5
P6KE150(C)A	128.00	143.00	158.00	1	207.	.92.	5
P6KE160(C)A	136.00	152.00	168.00	1	0219.	82.6	5
P6KE170(C)A	145.00	162.00	179.00	1	0234.	2.5	5
P6KE180(C)A	154.00	171.00	189.00	11	0246.	2.21	55
P6KE200(C)A	171.00	190.00	210.	1	0274.	.91.	5
P6KE220(C)A	185.00	209.	00231.		0328.	81.5	
P6KE250(C)A	214.	00237.	00263.	1	0344.	1.3	5
P6KE300(C)A	00256.	00285.	00315.	1	0414.	1.11	5
P6KE350(C)A	00300.	00332.	00368.	1	0482.	.0	5
P6KE400(C)A	00342.	00380.	00420.	1	0548.		5
P6KE440(C)A	00376.	00418.	00462.	1	0600.0		5

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