

Features

- ◆ Optimized for LAN protection applications
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ 600w peak pulse power capability
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Fast response time: typically less than 1.0ps from 0v to V_{BRmin}
- ◆ High temperature soldering guaranteed:
260°C/10S at terminals

DO-15



Mechanical Data

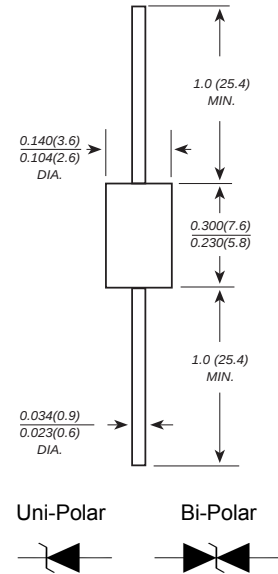
Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0116 ounce, 0.33 grams



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	SYMBOLS	VALUE	UNITS
Peak power dissipation (Note 1)	P _{ppm}	Minimum 600	Watts
Peak pulse reverse current (Note 1, Fig.3)	I _{ppm}	See Table 1	Amps
Steady state power dissipation (Note 2)	P _{M(AV)}	5.0	Watts
Peak forward surge current (Note 3)	I _{FSM}	100	Amps
Maximum instantaneous forward voltage at 50A for unidirectional only (Note 4)	V _F	3.5/5.0	Volts
Operating junction and storage temperature range	T _{STG} , T _J	-55 to + 150	°C

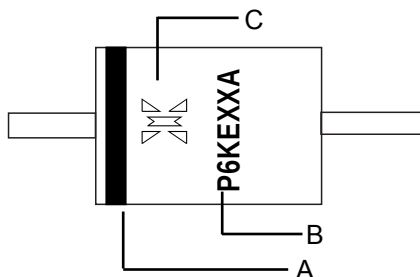
Notes:

- 1.10/1000μs waveform non-repetitive current pulse, per Fig.3 and derated above T_a=25°C per Fig.2
- 2.T_L=75°C, lead lengths 9.5mm, Mounted on copper pad area of (40x40mm) Fig.5
- 3.Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.
- 4.V_F=3.5V max. for devices of V_{BR}≤220V, and V_F=5.0V max. for devices of V_{BR}>250V

Type		Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at VR	Breakdown Voltage at IT		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at Ipp
Uni-Polar	Bi-Polar	PPP	V(R)	IR	V (BR) (V)		IT	Ipp	Vc
		(W)	(V)	(uA)	Min.	Max.	(mA)	(A)	(V)
P6KE6.8A	P6KE6.8CA	600	5.8	1000	6.45	7.14	10	57.1	10.5
P6KE7.5A	P6KE7.5CA	600	6.4	500	7.13	7.88	1	53.1	11.3
P6KE8.2A	P6KE8.2CA	600	7.0	200	7.79	8.61	1	49.6	12.1
P6KE9.1A	P6KE9.1CA	600	7.8	50	8.65	9.55	1	44.8	13.4
P6KE10A	P6KE10CA	600	8.6	10	9.5	10.5	1	41.4	14.5
P6KE11A	P6KE11CA	600	9.4	5	10.5	11.6	1	38.5	15.6
P6KE12A	P6KE12CA	600	10.2	5	11.4	12.6	1	35.9	16.7
P6KE13A	P6KE13CA	600	11.1	5	12.4	13.7	1	33	18.2
P6KE15A	P6KE15CA	600	12.8	5	14.3	15.8	1	28.3	21.2
P6KE16A	P6KE16CA	600	13.6	5	15.2	16.8	1	26.7	22.5
P6KE18A	P6KE18CA	600	15.3	5	17.1	18.9	1	23.8	25.2
P6KE20A	P6KE20CA	600	17.1	5	19	21	1	21.7	27.7
P6KE22A	P6KE22CA	600	18.8	5	20.9	23.1	1	19.6	30.6
P6KE24A	P6KE24CA	600	20.5	5	22.8	25.2	1	18.1	33.2
P6KE27A	P6KE27CA	600	23.1	5	25.7	28.4	1	16	37.5
P6KE30A	P6KE30CA	600	25.6	5	28.5	31.5	1	14.5	41.4
P6KE33A	P6KE33CA	600	28.2	5	31.4	34.7	1	13.1	45.7
P6KE36A	P6KE36CA	600	30.8	5	34.2	37.8	1	12	49.9
P6KE39A	P6KE39CA	600	33.3	5	37.1	41	1	11.1	53.9
P6KE43A	P6KE43CA	600	36.8	5	40.9	45.2	1	10.1	59.3
P6KE47A	P6KE47CA	600	40.2	5	44.7	49.4	1	9.3	64.8
P6KE51A	P6KE51CA	600	43.6	5	48.5	53.6	1	8.6	70.1
P6KE56A	P6KE56CA	600	47.8	5	53.2	58.8	1	7.8	77
P6KE62A	P6KE62CA	600	53	5	58.9	65.1	1	7.1	85
P6KE68A	P6KE68CA	600	58.1	5	64.6	71.4	1	6.5	92
P6KE75A	P6KE75CA	600	64.1	5	71.3	78.8	1	5.8	103
P6KE82A	P6KE82CA	600	70.1	5	77.9	86.1	1	5.3	113
P6KE91A	P6KE91CA	600	77.8	5	86.5	95.5	1	4.8	125
P6KE100A	P6KE100CA	600	85.5	5	95	105	1	4.4	137
P6KE110A	P6KE110CA	600	94	5	105	116	1	3.9	152
P6KE120A	P6KE120CA	600	102	5	114	126	1	3.6	165
P6KE130A	P6KE130CA	600	111	5	124	137	1	3.4	179
P6KE150A	P6KE150CA	600	128	5	143	158	1	2.9	207
P6KE160A	P6KE160CA	600	136	5	152	168	1	2.7	219
P6KE170A	P6KE170CA	600	145	5	162	179	1	2.6	234
P6KE180A	P6KE180CA	600	154	5	171	189	1	2.5	246

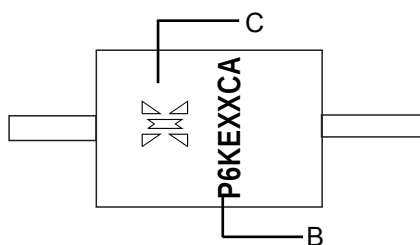
Type		Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at VR	Breakdown Voltage at IT		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at Ipp
Uni-Polar	Bi-Polar	PPP	V(R)	IR	V (BR) (V)		IT	Ipp	Vc
		(W)	(V)	(uA)	Min.	Max.	(mA)	(A)	(V)
P6KE200A	P6KE200CA	600	171	5	190	210	1	2.2	274
P6KE220A	P6KE220CA	600	185	5	209	231	1	1.8	328
P6KE250A	P6KE250CA	600	214	5	237	263	1	1.7	344
P6KE300A	P6KE300CA	600	256	5	285	315	1	1.4	414
P6KE350A	P6KE350CA	600	300	5	332	368	1	1.2	482
P6KE400A	P6KE400CA	600	342	5	380	420	1	1.1	548
P6KE440A	P6KE440CA	600	376	5	418	462	1	1.0	602

Marking For Uni-Polar



Symbol	Explanation
A	Color Band Denotes Cathode
B	Product Name
C	Logo

Marking For Bi-Polar



Symbol	Explanation
B	Product Name
C	Logo

Ratings And Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

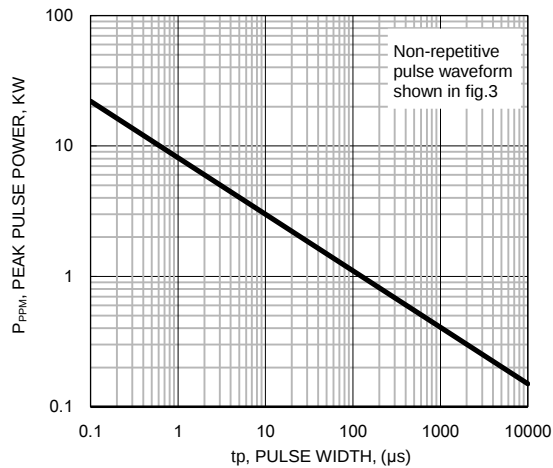


Fig.2 Pulse Derating Curve

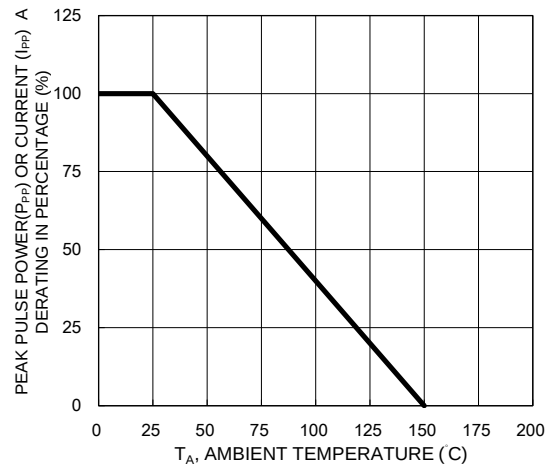


Fig.3 Claming Power Pulse Waveform

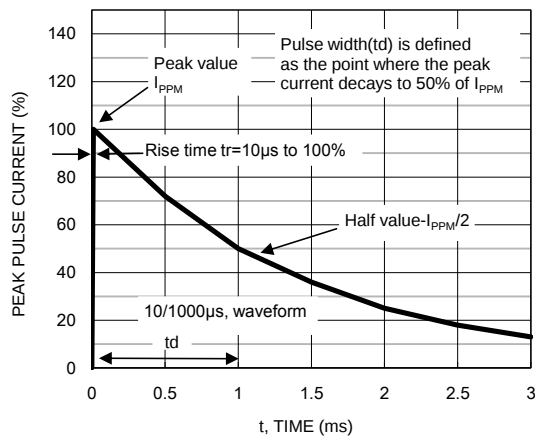


Fig.4 Maximum Non-repetitive Forward Surge Current

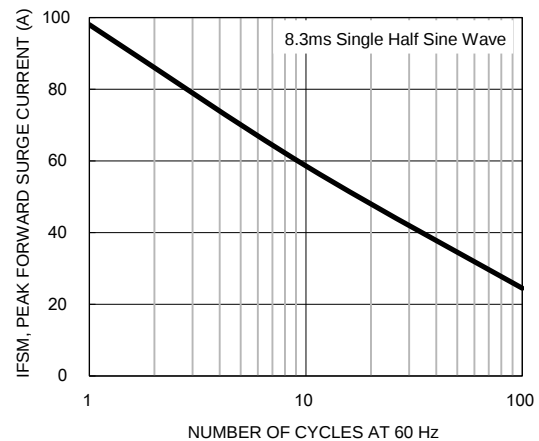
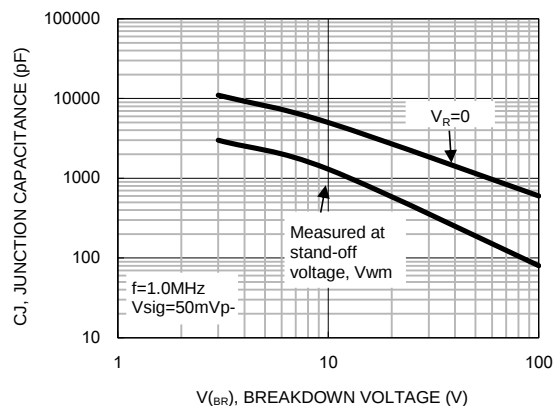
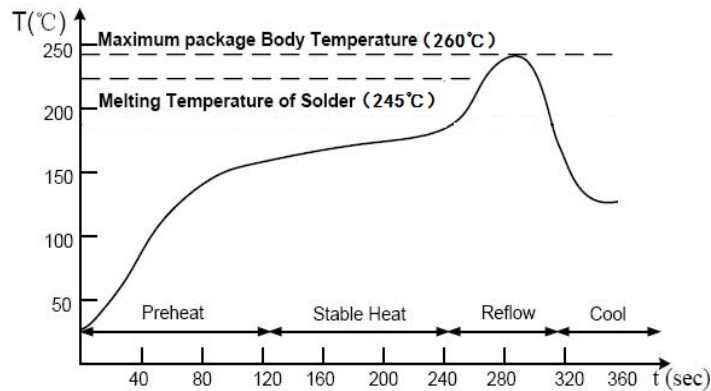


Fig.5 Typical Junction Capacitance



Suggested Soldering Temperature Profile

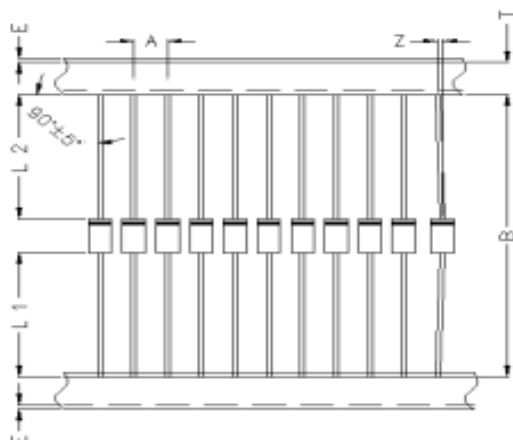


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Taping Specifications



Item	Symbol	Specifications(mm)
Component Pitch	A	5.0±0.5
Inner Tape Pitch	B	52.4±1.5
Component alignment	Z	1.2 Max
Tape width	T	6.0±0.5
Exposed adhesive	E	0.8 Max
Body eccentricity	L1-L2	1.0 Max

Ammunition Package Specifications

Package	Inner Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
DO - 15	255*150*75	3	420*276*312	30