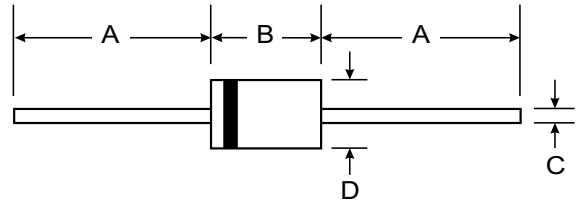
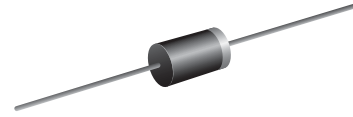


Features

- Glass passivated chip
- 600 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data

- Case:DO-15 Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- System: Accreditation through IATF16949 System
- High reliability grade (AEC Q101 qualified)
- Mounting position: Any



DO-15		
Dim	Min	Max
A	25.40	—
B	5.50	7.62
C	0.686	0.889
D	2.60	3.60
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P _{PP}	600	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P _D	5.0	W
Peak forward surge current, 8.3 ms single half sinewave	I _{FSM}	100	A
Maximum instantaneous forward voltage at 25 A for unidirectional only ⁽³⁾	V _F	3.5/6.5	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +175	°C

Note:

- 1)Non-repetitive current pulse per Fig.5 and derated above T_A= 25 °C per Fig.1 ;
- 2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum ;
- 3)V_F<3.5V for devices of V_{BR}<200V and V_F<6.5V for devices of V_{BR}>201V.

Part Number		Reverse Stand-off Voltage	Breakdown Voltage $V_{BR} @ I_T$		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
TP6KE6.8A	TP6KE6.8CA	5.8	6.45	7.14	10	10.5	58.1	1000
TP6KE7.5A	TP6KE7.5CA	6.4	7.13	7.88	10	11.3	54.0	500
TP6KE8.2A	TP6KE8.2CA	7.0	7.79	8.61	10	12.1	50.4	200
TP6KE9.1A	TP6KE9.1CA	7.8	8.65	9.55	1	13.4	45.5	50
TP6KE10A	TP6KE10CA	8.6	9.50	10.50	1	14.5	42.1	10
TP6KE11A	TP6KE11CA	9.4	10.50	11.60	1	15.6	39.1	5
TP6KE12A	TP6KE12CA	10.2	11.40	12.60	1	16.7	36.5	5
TP6KE13A	TP6KE13CA	11.1	12.40	13.70	1	18.2	33.5	1
TP6KE15A	TP6KE15CA	12.8	14.30	15.80	1	21.2	28.8	1
TP6KE16A	TP6KE16CA	13.6	15.20	16.80	1	22.5	27.1	1
TP6KE18A	TP6KE18CA	15.3	17.10	18.90	1	25.5	24.2	1
TP6KE20A	TP6KE20CA	17.1	19.00	21.00	1	27.7	22.0	1
TP6KE22A	TP6KE22CA	18.8	20.90	23.10	1	30.6	19.9	1
TP6KE24A	TP6KE24CA	20.5	22.80	25.20	1	33.2	18.4	1
TP6KE27A	TP6KE27CA	23.1	25.70	28.40	1	37.5	16.3	1
TP6KE30A	TP6KE30CA	25.6	28.50	31.50	1	41.4	14.7	1
TP6KE33A	TP6KE33CA	28.2	31.40	34.70	1	45.7	13.3	1
TP6KE36A	TP6KE36CA	30.8	34.20	37.80	1	49.9	12.2	1
TP6KE39A	TP6KE39CA	33.3	37.10	41.00	1	53.9	11.3	1
TP6KE43A	TP6KE43CA	36.8	40.90	45.20	1	59.3	10.3	1
TP6KE47A	TP6KE47CA	40.2	44.70	49.40	1	64.8	9.4	1
TP6KE51A	TP6KE51CA	43.6	48.50	53.60	1	70.1	8.7	1
TP6KE56A	TP6KE56CA	47.8	53.20	58.80	1	77.0	7.9	1
TP6KE62A	TP6KE62CA	53.0	58.90	65.10	1	85.0	7.2	1
TP6KE68A	TP6KE68CA	58.1	64.60	71.40	1	92.0	6.6	1
TP6KE75A	TP6KE75CA	64.1	71.30	78.80	1	103.0	5.9	1
TP6KE82A	TP6KE82CA	70.1	77.90	86.10	1	113.0	5.4	1
TP6KE91A	TP6KE91CA	77.8	86.50	95.50	1	125.0	4.9	1
TP6KE100A	TP6KE100CA	85.5	95.0	105.0	1	137.0	4.5	1
TP6KE110A	TP6KE110CA	94.0	105.0	116.0	1	152.0	4.0	1
TP6KE120A	TP6KE120CA	102.0	114.0	126.0	1	165.0	3.7	1
TP6KE130A	TP6KE130CA	111.0	124.0	137.0	1	179.0	3.4	1
TP6KE150A	TP6KE150CA	128.0	143.0	158.0	1	207.0	2.9	1
TP6KE160A	TP6KE160CA	136.0	152.0	168.0	1	219.0	2.8	1
TP6KE170A	TP6KE170CA	145.0	162.0	179.0	1	234.0	2.6	1
TP6KE180A	TP6KE180CA	154.0	171.0	189.0	1	246.0	2.5	1
TP6KE200A	TP6KE200CA	171.0	190.0	210.0	1	274.0	2.2	1
TP6KE220A	TP6KE220CA	185.0	209.0	231.0	1	328.0	1.9	1
TP6KE250A	TP6KE250CA	214.0	237.0	263.0	1	344.0	1.8	1
TP6KE300A	TP6KE300CA	256.0	285.0	315.0	1	414.0	1.5	1
TP6KE350A	TP6KE350CA	300.0	332.0	368.0	1	482.0	1.3	1
TP6KE400A	TP6KE400CA	342.0	380.0	420.0	1	548.0	1.1	1
TP6KE440A	TP6KE440CA	376.0	418.0	462.0	1	602.0	1.0	1
TP6KE480A	TP6KE480CA	408.0	456.0	504.0	1	658.0	0.9	1
TP6KE510A	TP6KE510CA	434.0	485.0	535.0	1	698.0	0.9	1
TP6KE520A	TP6KE520CA	442.0	494.0	546.0	1	698.0	0.9	1
TP6KE530A	TP6KE530CA	450.0	503.0	556.0	1	725.0	0.8	1
TP6KE540A	TP6KE540CA	459.0	513.0	567.0	1	740.0	0.8	1
TP6KE550A	TP6KE550CA	467.0	522.5	577.5	1	760.0	0.8	1
TP6KE600A	TP6KE600CA	509.0	570.0	630.0	1	780.0	0.8	1

Ratings and Characteristic Curves $T_A = 25^\circ\text{C}$ unless otherwise noted

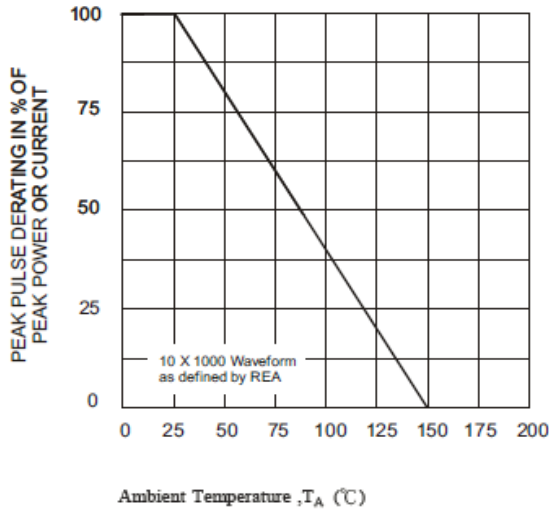


Fig. 1 - Pulse Derating Curve

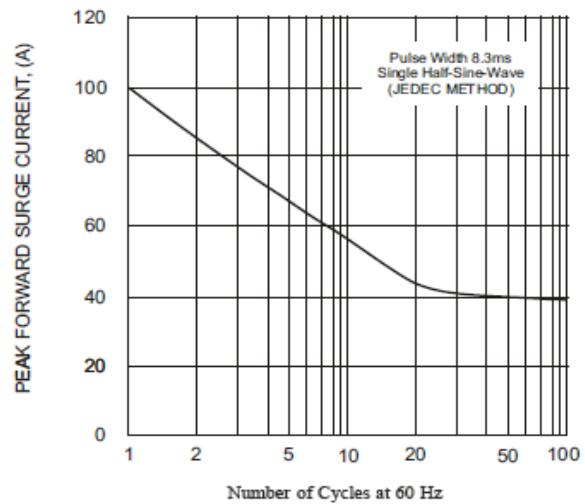


Fig. 2 - Maximum Non-Repetitive Surge Current

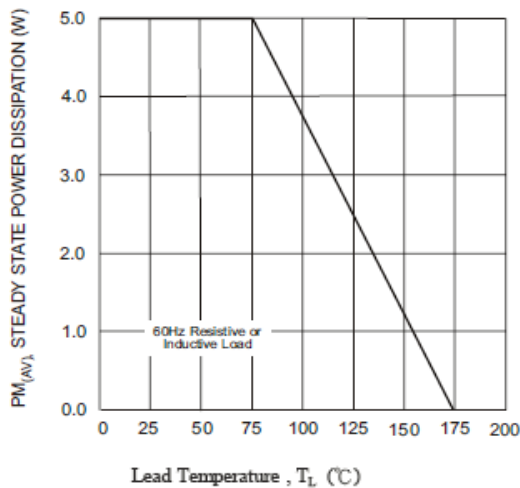


Fig. 3 - Steady State Power Derating Curve

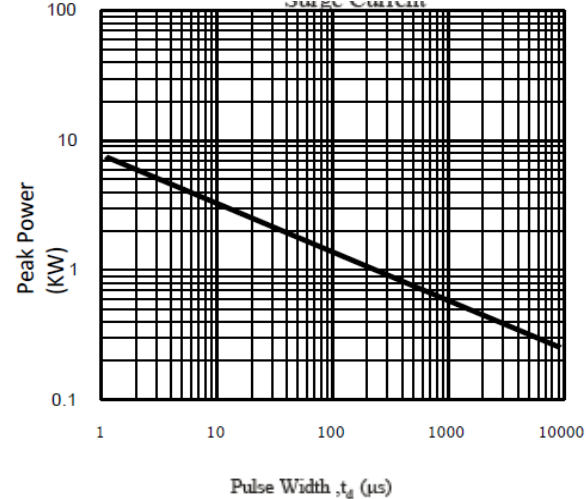


Fig. 4 - Peak Pulse Power Rating Curve

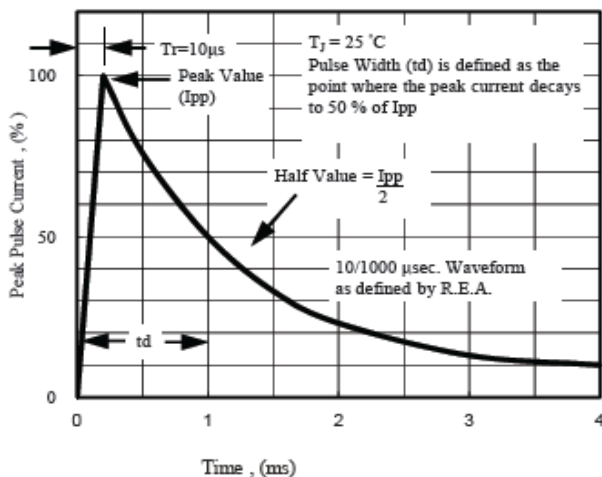


Fig. 5 - Pulse Waveform

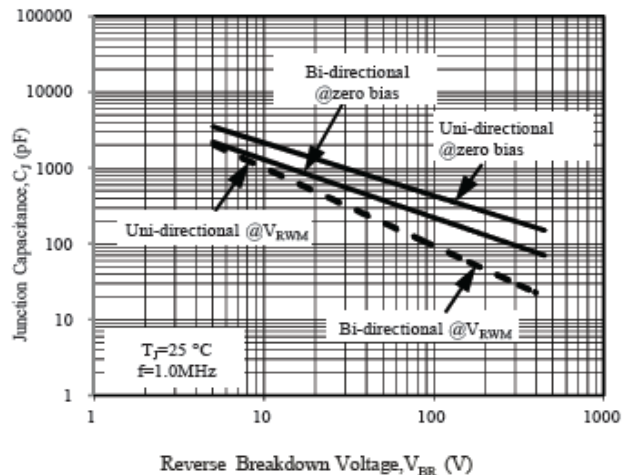


Fig. 6 - Typical Junction Capacitance