

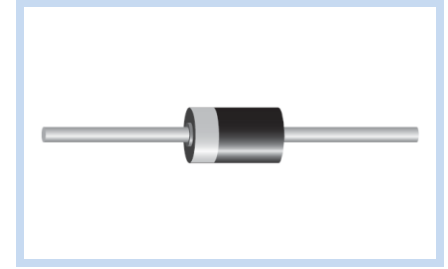
Transient Voltage Suppressors 600W DO-15 AEC-Q101

P6KE-A Series

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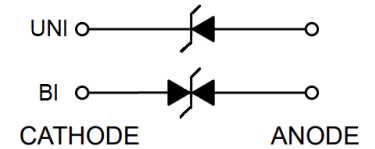
FEATURE

- IEC 61000-4-2 ESD: $\pm 30\text{kV}$ (Air), $\pm 30\text{kV}$ (Contact)
- 600W Peak Pulse Power (10/1000 μs Waveform)
- 6.8V to 600V Standoff Voltage
- Fast Response Time
- Excellent Clamping Capability
- Glass Passivated Junction
- UL Flammability Classification Rating 94V-0
- UL Safety Approved Certification No: E223045
- AEC-Q101 Qualified



MECHANICAL DATA

- Case: DO-15, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color Band Denotes Cathode End Except Bipolar



MAXIMUM RATINGS



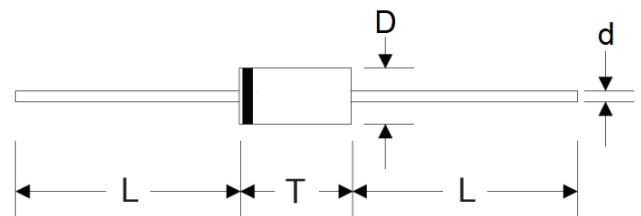
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation On 10/1000 μs Waveform	P_{PPM}	Minimum 600	W
Peak Pulse Current On 10/1000 μs Waveform	I_{PPM}	See Table	A
Steady State Power Dissipation At $T_L = 75^\circ\text{C}$	$P_{M(AV)}$	5.0	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	100	A
IEC 61000-4-2 ESD (Air)	V_{ESD}	± 30	kV
IEC 61000-4-2 ESD (Contact)	V_{ESD}	± 30	kV
Operating Junction And Storage Temperature Range	T_J, T_{STG}	-55 to +175	$^\circ\text{C}$
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	20	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	75	$^\circ\text{C/W}$

Note:

1. $T_A = 25^\circ\text{C}$ Ambient temperature unless otherwise specified.
2. Non-repetitive current pulse, and derated above $T_A = 25^\circ\text{C}$.
3. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minute maximum.

DIMENSIONS

DO-15	Min (mm)	Max (mm)
D	2.60	3.60
T	5.80	7.60
L	25.4	-
d	0.71	0.86



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ELECTRICAL CHARACTERISTICS

Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V _{RWM} (V)	V _{BR} Min(V)	V _{BR} Max(V)	I _T (mA)	I _R (uA) @ V _{RWM}	V _C (V) @ I _{PP}	I _{PP} (A) Max
P6KE6.8A-A	P6KE6.8CA-A	5.80	6.45	7.14	10	1000	10.5	58.1
P6KE7.5A-A	P6KE7.5CA-A	6.40	7.13	7.88	10	500	11.3	54.0
P6KE8.2A-A	P6KE8.2CA-A	7.02	7.79	8.61	10	200	12.1	50.4
P6KE9.1A-A	P6KE9.1CA-A	7.78	8.65	9.55	1	50	13.4	45.5
P6KE10A-A	P6KE10CA-A	8.55	9.50	10.5	1	10	14.5	42.1
P6KE11A-A	P6KE11CA-A	9.40	10.5	11.6	1	5	15.6	39.1
P6KE12A-A	P6KE12CA-A	10.2	11.4	12.6	1	5	16.7	36.5
P6KE13A-A	P6KE13CA-A	11.1	12.4	13.7	1	1	18.2	33.5
P6KE15A-A	P6KE15CA-A	12.8	14.3	15.8	1	1	21.2	28.8
P6KE16A-A	P6KE16CA-A	13.6	15.2	16.8	1	1	22.5	27.1
P6KE18A-A	P6KE18CA-A	15.3	17.1	18.9	1	1	25.2	24.2
P6KE20A-A	P6KE20CA-A	17.1	19.0	21.0	1	1	27.7	22.0
P6KE22A-A	P6KE22CA-A	18.8	20.9	23.1	1	1	30.6	19.9
P6KE24A-A	P6KE24CA-A	20.5	22.8	25.2	1	1	33.2	18.4
P6KE27A-A	P6KE27CA-A	23.1	25.7	28.4	1	1	37.5	16.3
P6KE30A-A	P6KE30CA-A	25.6	28.5	31.5	1	1	41.4	14.7
P6KE33A-A	P6KE33CA-A	28.2	31.4	34.7	1	1	45.7	13.3
P6KE36A-A	P6KE36CA-A	30.8	34.2	37.8	1	1	49.9	12.2
P6KE39A-A	P6KE39CA-A	33.3	37.1	41.0	1	1	53.9	11.3
P6KE43A-A	P6KE43CA-A	36.8	40.9	45.2	1	1	59.3	10.3
P6KE47A-A	P6KE47CA-A	40.2	44.7	49.4	1	1	64.8	9.40
P6KE51A-A	P6KE51CA-A	43.6	48.5	53.6	1	1	70.1	8.70
P6KE56A-A	P6KE56CA-A	47.8	53.2	58.8	1	1	77.0	7.90
P6KE62A-A	P6KE62CA-A	53.0	58.9	65.1	1	1	85.0	7.20
P6KE68A-A	P6KE68CA-A	58.1	64.6	71.4	1	1	92.0	6.60
P6KE75A-A	P6KE75CA-A	64.1	71.3	78.8	1	1	103	5.90
P6KE82A-A	P6KE82CA-A	70.1	77.9	86.1	1	1	113	5.40
P6KE91A-A	P6KE91CA-A	77.8	86.5	95.5	1	1	125	4.90
P6KE100A-A	P6KE100CA-A	85.5	95.0	105	1	1	137	4.50
P6KE110A-A	P6KE110CA-A	94.0	105	116	1	1	152	4.00
P6KE120A-A	P6KE120CA-A	102	114	126	1	1	165	3.70
P6KE130A-A	P6KE130CA-A	111	124	137	1	1	179	3.40
P6KE150A-A	P6KE150CA-A	128	143	158	1	1	207	2.90
P6KE160A-A	P6KE160CA-A	136	152	168	1	1	219	2.80
P6KE170A-A	P6KE170CA-A	145	162	179	1	1	234	2.60
P6KE180A-A	P6KE180CA-A	154	171	189	1	1	246	2.50
P6KE200A-A	P6KE200CA-A	171	190	210	1	1	274	2.20
P6KE220A-A	P6KE220CA-A	185	209	231	1	1	328	1.90
P6KE250A-A	P6KE250CA-A	214	237	263	1	1	344	1.80
P6KE300A-A	P6KE300CA-A	256	285	315	1	1	414	1.50
P6KE350A-A	P6KE350CA-A	300	332	368	1	1	482	1.30
P6KE400A-A	P6KE400CA-A	342	380	420	1	1	548	1.10
P6KE440A-A	P6KE440CA-A	376	418	462	1	1	602	1.04
P6KE480A-A	P6KE480CA-A	408	456	504	1	1	658	0.90
P6KE510A-A	P6KE510CA-A	434	485	535	1	1	698	0.90
P6KE530A-A	P6KE530CA-A	450	503.5	556.5	1	1	725	0.80
P6KE540A-A	P6KE540CA-A	459	513.0	567.0	1	1	740	0.80
P6KE550A-A	P6KE550CA-A	467	522.5	577.5	1	1	760	0.80
P6KE600A-A	P6KE600CA-A	510	570.0	630.0	1	1	828	0.75

Note: T_A = 25°C ambient temperature unless otherwise specified.

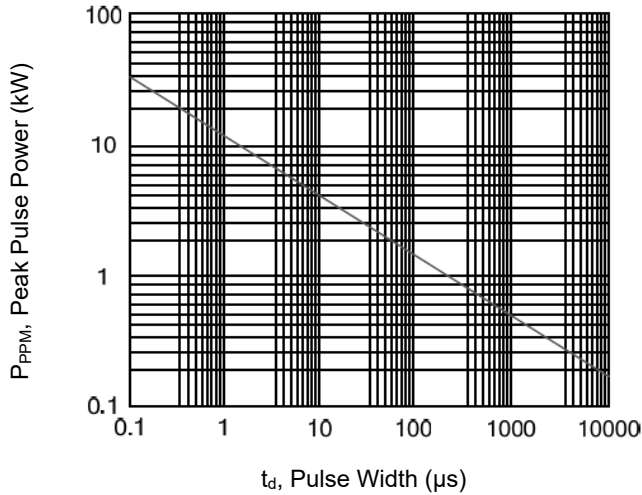
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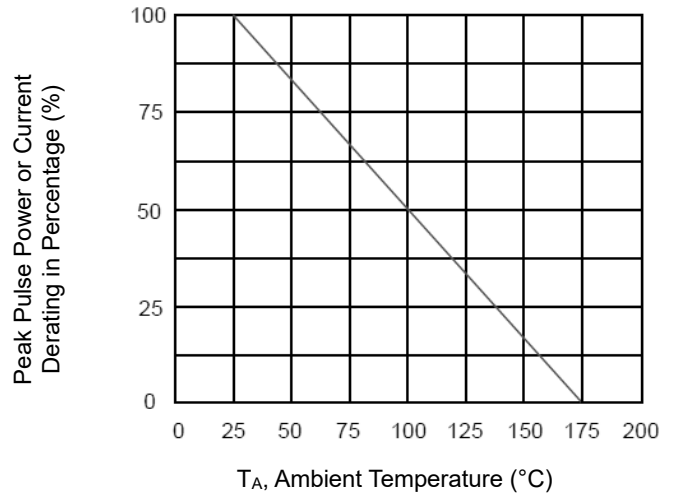
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CHARACTERISTIC CURVES

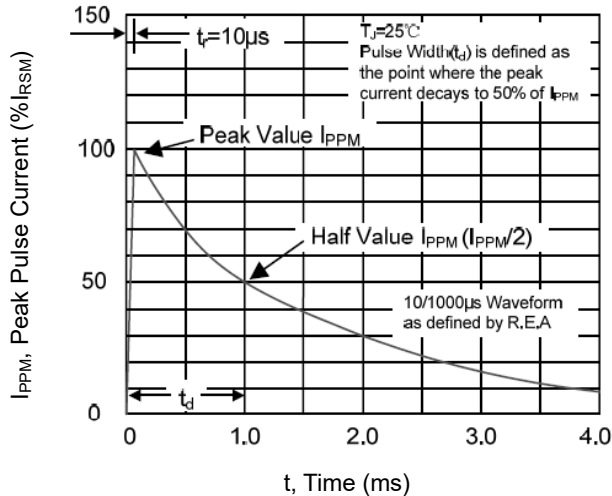
Peak Pulse Power Rating Curve



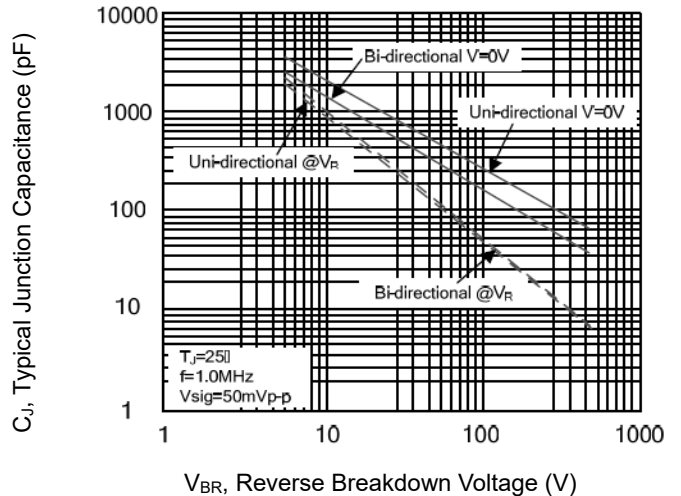
Pulse Derating Curve



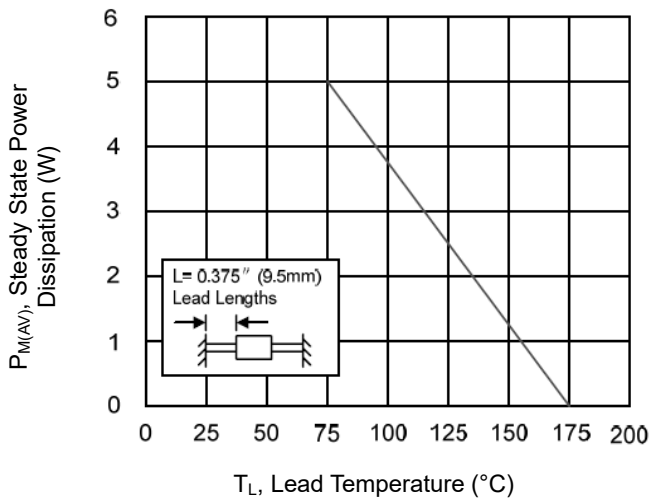
Pulse Waveform



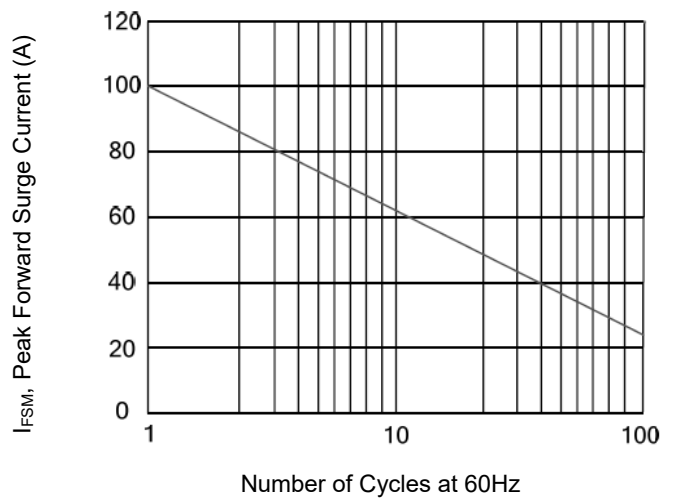
Typical Junction Capacitance



Steady State Power Dissipation Derating Curve



Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



*Specifications subject to change without notice.