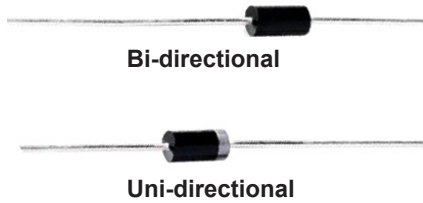


Transient Voltage Suppression Diodes P6KEG Series, 600W

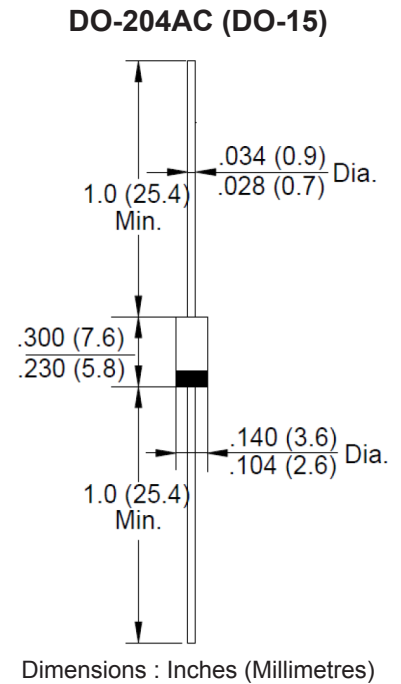
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**RoHS
Compliant**



Features

- Glass Passivated (GPP)
- Low leakage
- Uni and bi-directional versions available
- Excellent clamping capability
- Fast response time
- Lead free
- Case style: DO-204AC (DO-15) molded plastic



Maximum Ratings and Electrical Characteristics

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

Characteristics	Symbol	Values	Unit
Peak pulse power dissipation with a 10/1000µs waveform	P _{PK}	600	W
Maximum Instantaneous Forward Voltage at 50A for Unidirectional Devices Only (Note 3)	V _F	See Note 3	°C/W
Typical Thermal Resistance Junction to Lead	R _{θJL}	20	
Typical Thermal Resistance Junction to Ambient	R _{θJA}	75	
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	100	A
Power dissipation on infinite heat sink at T _L = 75°C	P _D	5	W
Operating Junction Temperature Range	T _J	-55 to + 150	°C
Storage Temperature Range	T _{STG}		

- Notes :**
1. Non-repetitive current pulse ,per Fig. 3 and derated above T_A = 25°C per Fig. 1.
 2. 8.3ms single half-wave duty cycle = 4 pulses per minutes maximum (uni-directional units only).
 3. V_F = 3.5V on P6KE6.8G thru P6KE200AG devices

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Rating and Characteristic Curves

Fig. 1 - Maximum Non-Repetitive Peak Forward Surge Current

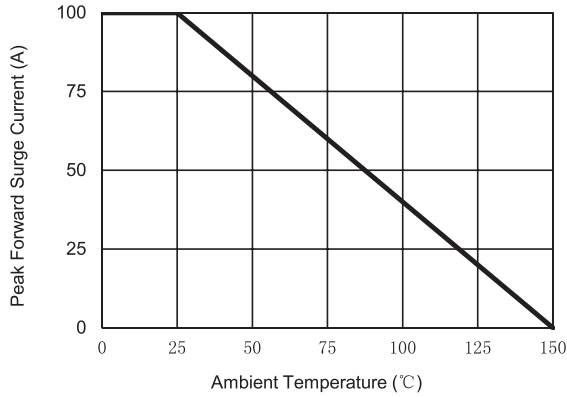


Fig. 2 - Maximum Non-Repetitive Surge Current

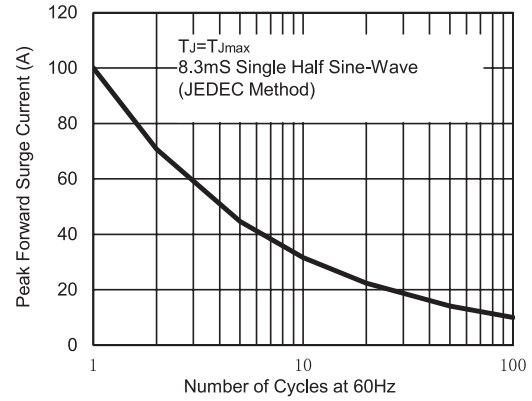


Fig. 3 - Pulse Waveform

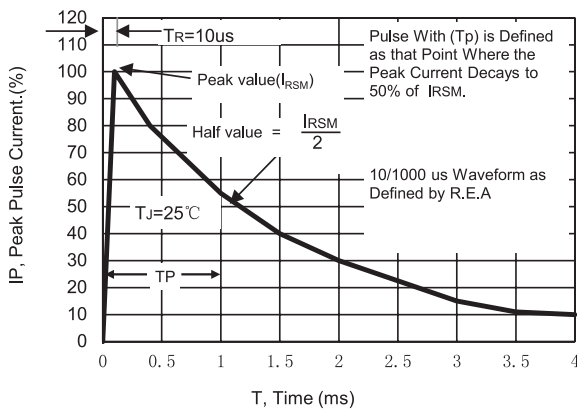


Fig. 4 - Typical Junction Capacitance

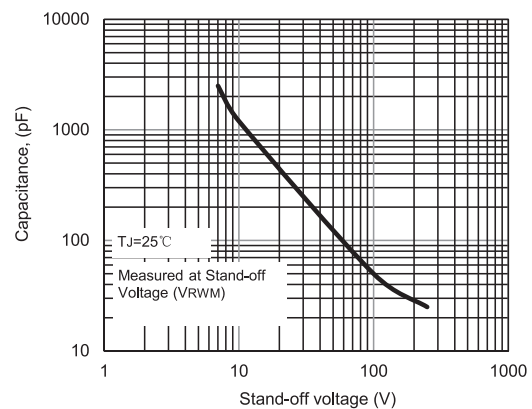


Fig. 5 - Pulse Rating Curve

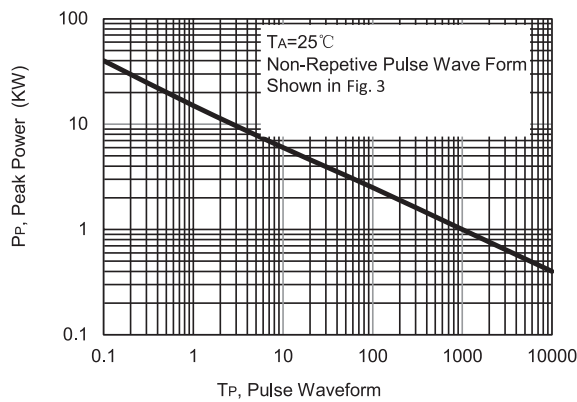
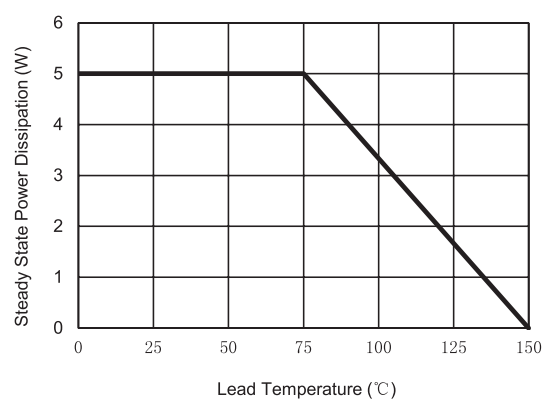


Fig. 6 - Steady State Power Derating Curve



Transient Voltage Suppression Diodes

P6KEG Series, 600W

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Part Number		Reverse Stand off Voltage	Breakdown Voltage at IT V(BR) (V)			Max. Reverse Leakage at Vr	Max. Clamping Voltage at IPPM	Max. Peak Pulse Surge Current	Max. Voltage Temp.
Uni-directional	Bi-directional		Min. (V)	Max. (V)	It (mA)				
(UNI)	(BI)	V _{RWM} (V)				IR(μA)	V _c (V)	I _{pp} (A)	mV/°C
P6KEG6.8A	P6KEG6.8CA	5.8	6.45	7.14	10	1000	10.5	57	0.057
P6KEG7.5A	-	6.4	7.13	7.88	10	500	11.3	53	0.061
-	P6KEG8.2CA	7.02	7.79	8.61	10	200	12.1	50	0.065
-	P6KEG9.1CA	7.78	8.65	9.55	1	50	13.4	45	0.068
P6KEG10A	P6KEG10CA	8.55	9.5	10.5	1	10	14.5	41	0.073
P6KEG12A	P6KEG12CA	10.2	11.4	12.6	1	5	16.7	36	0.078
P6KEG13A	-	11.1	12.4	13.7	1	5	18.2	33	0.081
P6KEG15A	P6KEG15CA	12.8	14.3	15.8	1	5	21.2	28	0.084
P6KEG16A	P6KEG16CA	13.6	15.2	16.8	1	5	22.5	27	0.086
P6KEG18A	P6KEG18CA	15.3	17.1	18.9	1	5	25.2	24	0.088
P6KEG20A	-	17.1	19	21	1	5	27.7	22	0.09
P6KEG22A	-	18.8	20.9	23.1	1	5	30.6	20	0.092
P6KEG24A	P6KEG24CA	20.5	22.8	25.2	1	5	33.2	18	0.094
P6KEG30A	P6KEG30CA	25.6	28.5	31.5	1	5	41.4	14.4	0.097
P6KEG33A	P6KEG33CA	28.2	31.4	34.7	1	5	45.7	13.2	0.098
P6KEG36A	P6KEG36CA	30.8	34.2	37.8	1	5	49.9	12	0.099
P6KEG39A	P6KEG39CA	33.3	37.1	41	1	5	53.9	11.2	0.1
P6KEG43A	P6KEG43CA	36.8	40.9	45.2	1	5	59.3	10.1	0.101
P6KEG47A	P6KEG47CA	40.2	44.7	49.4	1	5	64.8	9.3	0.101
P6KEG51A	P6KEG51CA	43.6	48.5	53.6	1	5	70.1	8.6	0.102
P6KEG56A	P6KEG56CA	47.8	53.2	58.8	1	5	77	7.8	0.103
P6KEG62A	P6KEG62CA	53	58.9	65.1	1	5	85	7.1	0.104
P6KEG68A	P6KEG68CA	58.1	64.6	71.4	1	5	92	6.5	0.104
P6KEG130A	P6KEG130CA	111	124	137	1	5	179	3.3	0.107
P6KEG150A	-	128	143	158	1	5	207	2.9	0.108
P6KEG180A	P6KEG180CA	154	171	189	1	5	246	2.4	0.108
P6KEG200A	P6KEG200CA	171	190	210	1	5	274	2.2	0.108

Note: Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device.

Transient Voltage Suppression Diodes

P6KEG Series, 600W

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Part Number Table

Description	Part Number
TVS Diode, 600W, 6.8V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG6.8A
TVS Diode, 600W, 6.8V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG6.8CA
TVS Diode, 600W, 7.5V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG7.5A
TVS Diode, 600W, 8.2V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG8.2CA
TVS Diode, 600W, 9.1V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG9.1CA
TVS Diode, 600W, 10V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG10A
TVS Diode, 600W, 10V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG10CA
TVS Diode, 600W, 12V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG12A
TVS Diode, 600W, 12V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG12CA
TVS Diode, 600W, 13V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG13A
TVS Diode, 600W, 15V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG15A
TVS Diode, 600W, 15V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG15CA
TVS Diode, 600W, 16V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG16A
TVS Diode, 600W, 16V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG16CA
TVS Diode, 600W, 18V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG18A
TVS Diode, 600W, 18V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG18CA
TVS Diode, 600W, 20V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG20A
TVS Diode, 600W, 22V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG22A
TVS Diode, 600W, 24V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG24A
TVS Diode, 600W, 24V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG24CA
TVS Diode, 600W, 30V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG30A
TVS Diode, 600W, 30V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG30CA
TVS Diode, 600W, 33V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG33A
TVS Diode, 600W, 33V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG33CA
TVS Diode, 600W, 36V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG36A
TVS Diode, 600W, 36V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG36CA
TVS Diode, 600W, 39V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG39A
TVS Diode, 600W, 39V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG39CA
TVS Diode, 600W, 43V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG43A
TVS Diode, 600W, 43V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG43CA
TVS Diode, 600W, 47V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG47A
TVS Diode, 600W, 47V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG47CA
TVS Diode, 600W, 51V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG51A
TVS Diode, 600W, 51V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG51CA
TVS Diode, 600W, 56V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG56A
TVS Diode, 600W, 56V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG56CA
TVS Diode, 600W, 62V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG62A
TVS Diode, 600W, 62V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG62CA

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Transient Voltage Suppression Diodes

P6KEG Series, 600W

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Description	Part Number
TVS Diode, 600W, 68V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG68A
TVS Diode, 600W, 68V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG68CA
TVS Diode, 600W, 130V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG130A
TVS Diode, 600W, 130V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG130CA
TVS Diode, 600W, 150V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG150A
TVS Diode, 600W, 180V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG180A
TVS Diode, 600W, 180V _{BR} Nom, Bidirectional, DO-204AC (DO-15)	P6KEG180CA
TVS Diode, 600W, 200V _{BR} Nom, Unidirectional, DO-204AC (DO-15)	P6KEG200A
TVS Diode, 600W, 200V _{BR} Nom, Bidirectional DO-204AC (DO-15)	P6KEG200CA

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