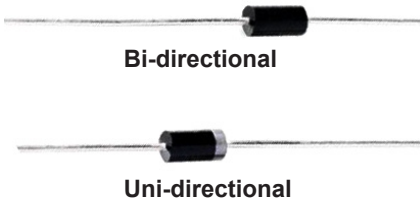


Transient Voltage Suppression Diodes P4KEG Series, 400W

multicomp PRO

**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-204AL (DO-41) 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 Power Dissipation at $T_A = 25^\circ\text{C}$ $T_P = 1\text{ms}$ (Note 1)	P_{PK}	400 (Min)	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	40	A
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ Lead Lengths 0.375" (9.5mm), See Fig. 6	$P_{M(AV)}$	1	W
Maximum Instantaneous Forward Voltage at 50A for Unidirectional Devices Only (Note 2)	V_F	See Note 3	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +175	

- Notes:**
1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 1.
 2. 8.3ms single half-wave duty cycle=4 pulses per minutes maximum (uni-directional units only).
 3. $V_F = 3.5\text{V}$ on P4KEG18 thru P4KEG33 devices.

Rating and Characteristic Curves

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

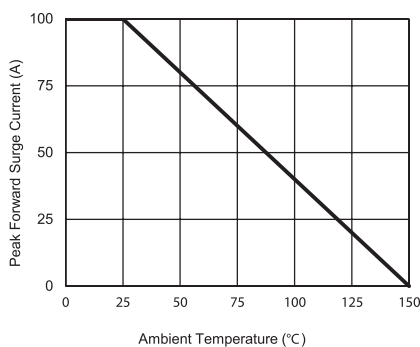


Fig. 2 - Maximum Non-Repetitive Surge Current

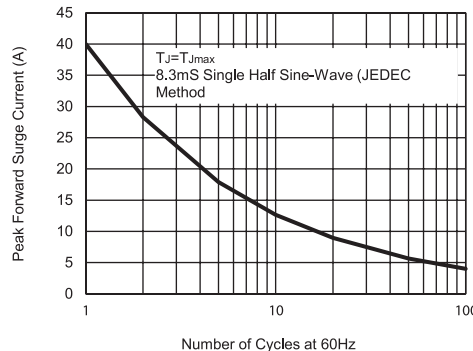
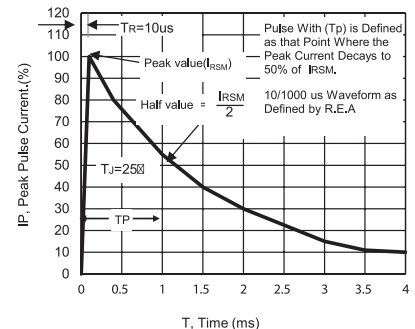


Fig. 3 - Pulse Waveform



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Fig.4- Typical Junction Capacitance

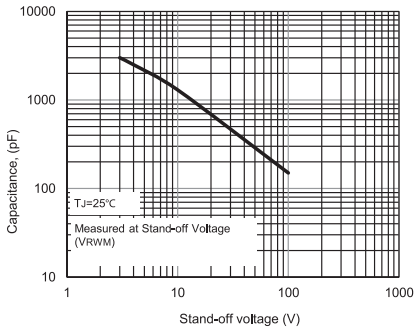


Fig. 5 - Pulse Rating Curve

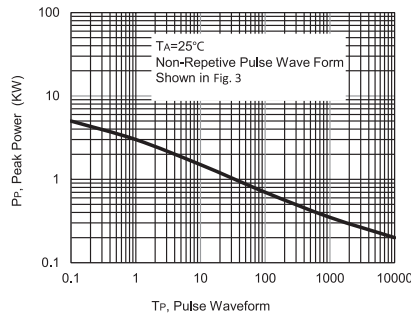
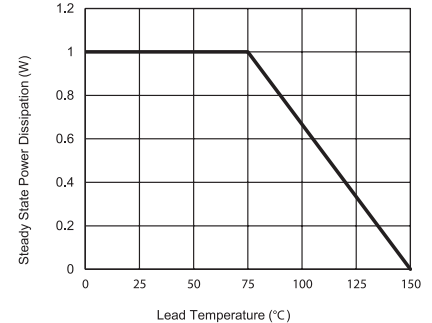


Fig. 6 - Steady State Power Derating Curve



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)	Vr(V)				IR(μA)	Vc(V)	Ipp(A)	mV/°C
P4KEG18A	-	15.3	17.1	18.9	1	5	25.2	17	0.088
-	P4KEG30CA	25.6	28.5	31.5	1	5	41.4	10	0.097
P4KEG33A	-	28.2	31.4	34.7	1	5	45.7	9	0.098

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

Part Number Table

Description	Part Number
TVS Diodes, 400W, 18V _{BR} Nom, Unidirectional, DO-204AL (DO-41)	P4KEG18A
TVS Diodes, 400W, 30V _{BR} Nom, Bidirectional, DO-204AL (DO-41)	P4KEG30CA
TVS Diodes, 400W, 33V _{BR} Nom, Unidirectional, DO-204AL (DO-41)	P4KEG33A

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