

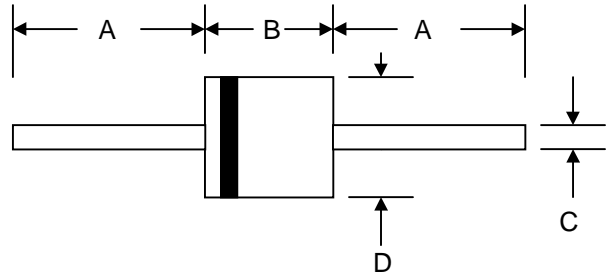
3KP180 – 3KP220CA

3000W TRANSIENT VOLTAGE SUPPRESSOR



Features

- Glass Passivated Die Construction
- 3000W Peak Pulse Power Dissipation
- 180V – 220V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



Mechanical Data

- Case: P-600, Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band Except Bi-Directional
- Marking: Type Number
- Weight: 2.10 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 5**

P-600		
Dim	Min	Max
A	25.4	—
B	8.60	9.10
C	1.20	1.30
D	8.60	9.10
All Dimensions in mm		

"C" Suffix Designates Bi-directional Devices
 "A" Suffix Designates 5% Tolerance Devices
 No Suffix Designates 10% Tolerance Devices

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A = 25^\circ\text{C}$ (Note 1, 2, 5) Figure 3	PPPM	3000 Minimum	W
Peak Forward Surge Current (Note 3)	IFSM	250	A
Peak Pulse Current on 10/1000 μS Waveform (Note 1) Figure 1	IPPM	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	PM(AV)	8.0	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +175	$^\circ\text{C}$

- Note: 1. Non-repetitive current pulse per Figure 1 and derated above $T_A = 25^\circ\text{C}$ per Figure 4.
 2. Mounted on 20mm² copper pad.
 3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.
 4. Lead temperature at 75 $^\circ\text{C}$.
 5. Peak pulse power waveform is 10/1000 μS .

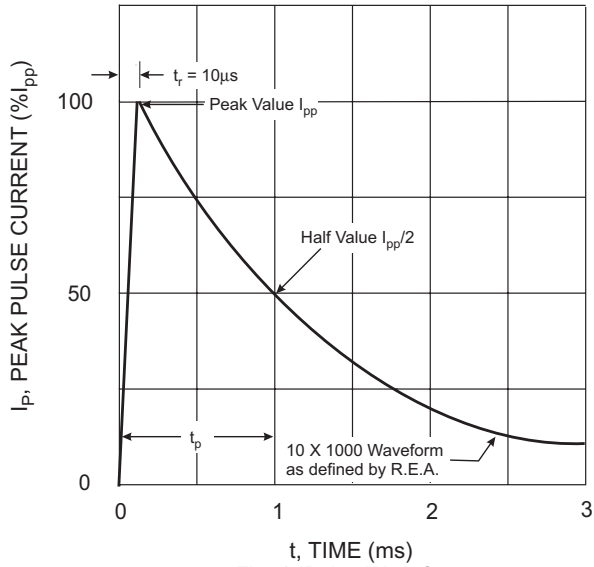


Fig. 1 Pulse Waveform

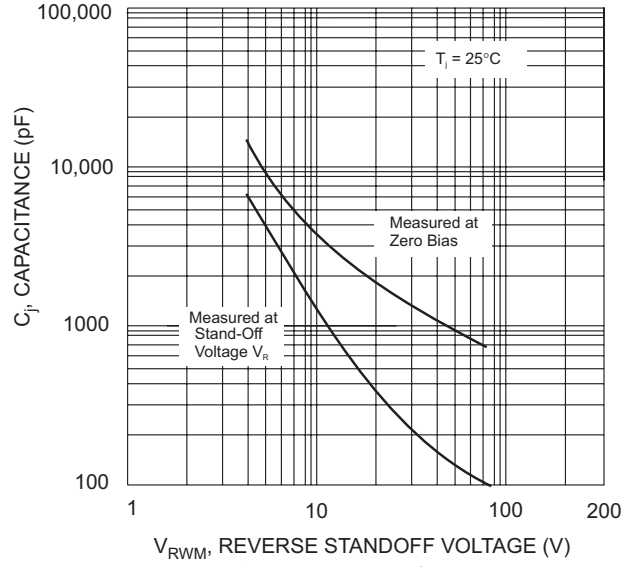


Fig. 2 Typical Junction Capacitance

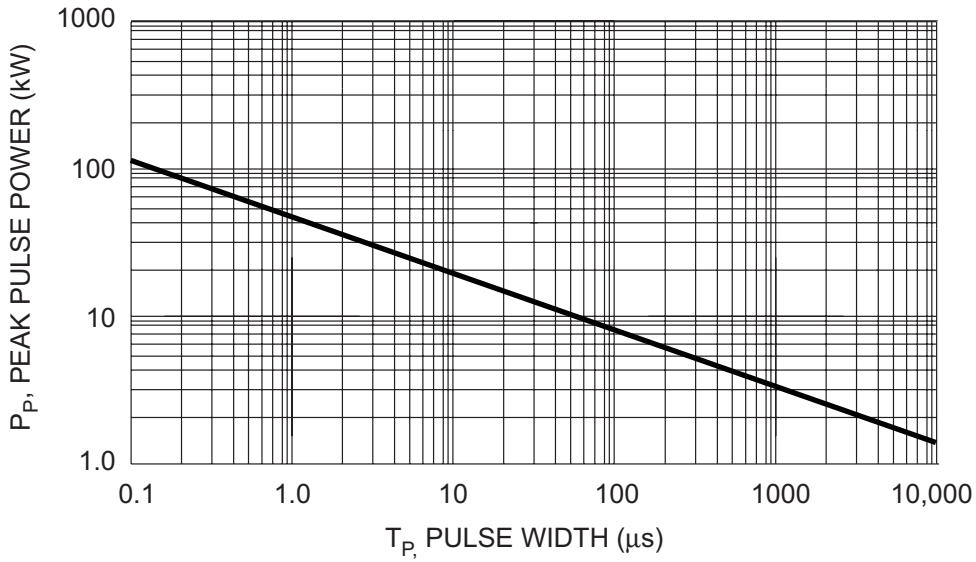


Fig. 3 Pulse Derating Curve

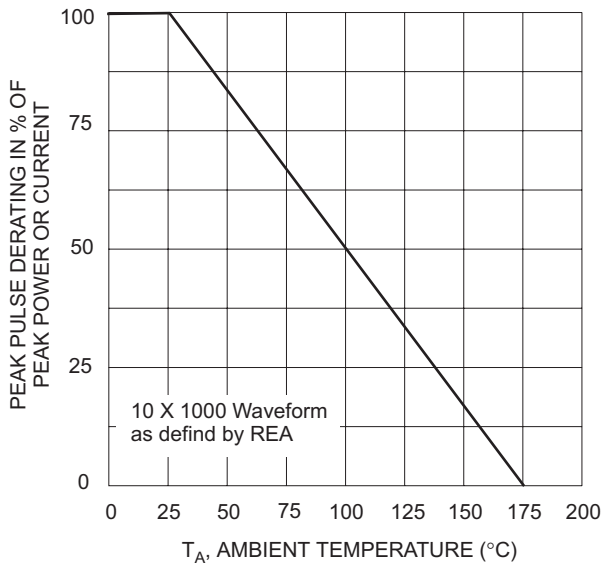


Fig. 4 Pulse Derating Curve

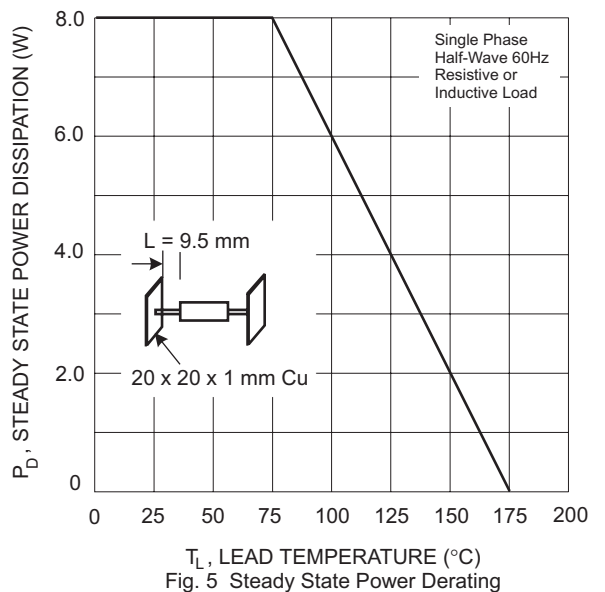


Fig. 5 Steady State Power Derating

UNI-DIRECTIONAL 3000 WATT AXIAL LEAD TVS

UNI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @VRWM IR (uA)
3KP180	180.00	198.00	253.80	1	322.0	9.3	5
3KP180A	180.00	198.00	230.40	1	292.0	10.3	5
3KP190	190.00	209.00	267.90	1	340.0	8.8	5
3KP190A	190.00	209.00	243.20	1	308.0	9.7	5
3KP200	200.00	220.00	282.00	1	358.0	8.4	5
3KP200A	200.00	220.00	256.00	1	324.0	9.3	5
3KP210	210.00	231.00	296.10	1	376.0	7.8	5
3KP210A	210.00	231.00	268.80	1	340.0	8.8	5
3KP220	220.00	242.00	310.20	1	394.0	7.6	5
3KP220A	220.00	242.00	281.60	1	356.0	8.4	5

BI-DIRECTIONAL 3000 WATT AXIAL LEAD TVS

BI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @VRWM IR (uA)
3KP180C	180.00	198.00	253.80	1	322.0	9.3	5
3KP180CA	180.00	198.00	230.40	1	292.0	10.3	5
3KP190C	190.00	209.00	267.90	1	340.0	8.8	5
3KP190CA	190.00	209.00	243.20	1	308.0	9.7	5
3KP200C	200.00	220.00	282.00	1	358.0	8.4	5
3KP200CA	200.00	220.00	256.00	1	324.0	9.3	5
3KP210C	210.00	231.00	296.10	1	376.0	7.8	5
3KP210CA	210.00	231.00	268.80	1	340.0	8.8	5
3KP220C	220.00	242.00	310.20	1	394.0	7.6	5
3KP220CA	220.00	242.00	281.60	1	356.0	8.4	5

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
3KPxx-T3	P-600	800/Tape & Reel
3KPxx	P-600	250 Units/Box

1. Products listed in **bold** are WTE **Preferred** devices.
2. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
3. **To order RoHS / Lead Free version, add "-LF" suffix to part number above. For example, 3KP180-T3-LF.**

Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

Won-Top Electronics Co., Ltd.

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

Phone: 886-7-822-5408 or 886-7-822-5410

Fax: 886-7-822-5417

Email: sales@wontop.com

Internet: <http://www.wontop.com>

We power your everyday.