

1.Features

- 300 W peak pulse power ($t_p=8/20\mu s$)
- Bidirectional and unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ($C_j=60$ pF typ.)
- Protection two data lines
- IEC 61000-4-2 ± 30 kV contact ± 30 kV air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 12A(8/20 μs)

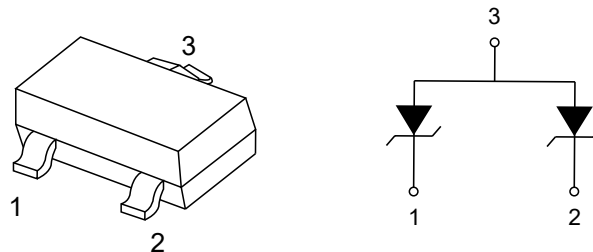
2.Applications

- Dataline
- Automatic Teller Machines
- Net works
- Power line

3.Mechanical Data

- SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

4.Pinning information



SOT-23



5. Absolute Maximum Ratings $T_A = 25^\circ\text{C}$

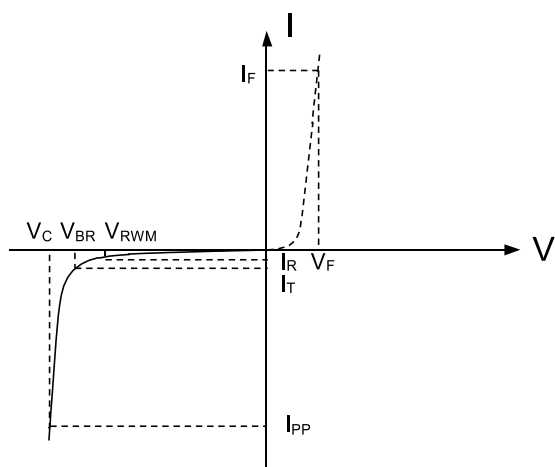
Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	300	W
Peak Pulse Current ($t_p=8/20\mu\text{s}$)(note1)	I_{PP}	12	A
ESD per IEC 61000-4-2(Air)	V_{ESD}	30	kV
ESD per IEC 61000-4-2(Contact)		30	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^\circ\text{C}$
Junction Temperature	T_J	-55 to 125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to 125	$^\circ\text{C}$



6. Electrical Characteristic ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	13.3	15	17	V
Reverse Leakage Current	I_R	$V_{RWM}=12\text{V}$, $T=25^\circ\text{C}$		0.5	1	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu\text{s}$			10	A
Clamping Voltage	V_C	$I_{PP}=12\text{A}$, $t_p=8/20\mu\text{s}$			30	V
Junction capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, (Pin1 Pin2 to Pin3)		60	65	pF

7. Electrical Parameters ($T_A=25^\circ\text{C}$ unless otherwise noted)

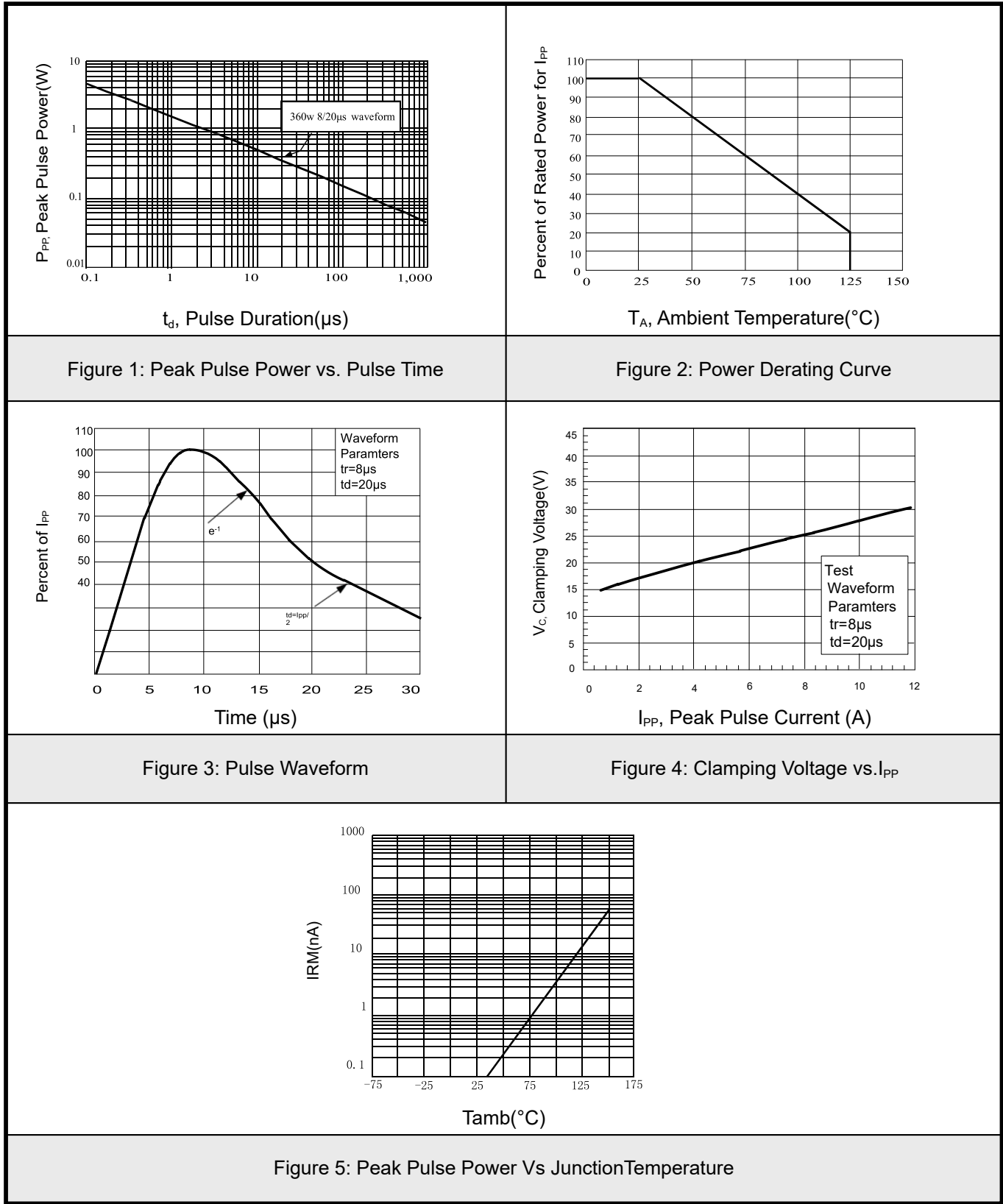


Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

Notes: 8/20 μs pulse waveform.

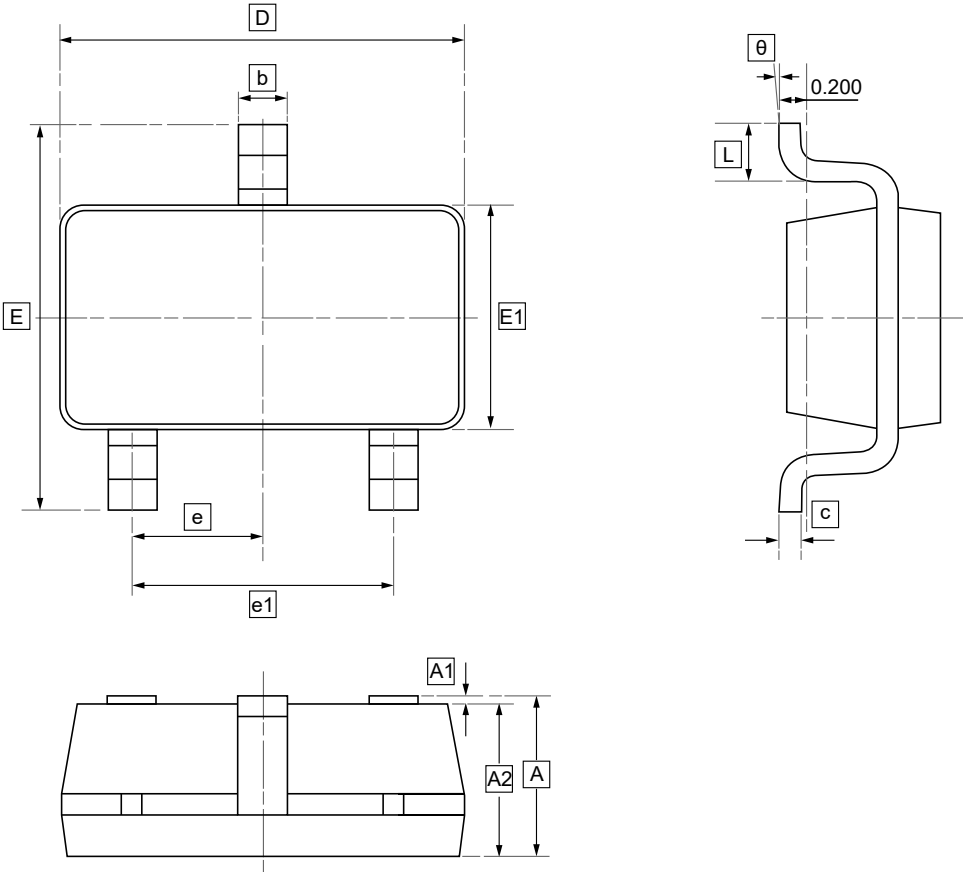


8. Typical characteristic





9.SOT23-3L Package Outline Dimensions

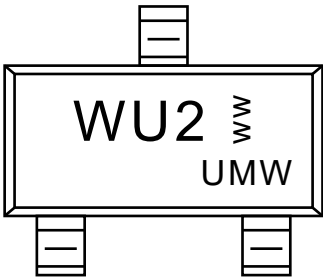


DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	b	c	D	E1	E	e	e1	L	K
Min	1.050	0.000	1.050	0.300	0.100	2.820	1.500	2.650	0.950	1.800	0.300	0°
Max	1.250	0.100	1.150	0.500	0.200	3.020	1.700	2.950	BSC	2.000	0.600	8°



10.Ordering information



ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW PESD12VS2UT	SOT-23	3000	Tape and reel



11.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

When applying our products, please do not exceed the maximum rated values, as this may affect the reliability of the entire system. Under certain conditions, any semiconductor product may experience faults or failures. Buyers are responsible for adhering to safety standards and implementing safety measures during system design, prototyping, and manufacturing when using our products to prevent potential failure risks that could lead to personal injury or property damage.

Unless explicitly stated in writing, UMW products are not intended for use in medical, life-saving, or life-sustaining applications, nor for any other applications where product failure could result in personal injury or death. If customers use or sell the product for such applications without explicit authorization, they assume all associated risks.

When reselling, applying, or exporting, please comply with export control laws and regulations of China, the United States, the United Kingdom, the European Union, and other relevant countries, regions, and international organizations.

This document and any actions by UMW do not grant any intellectual property rights, whether express or implied, by estoppel or otherwise. The product names and marks mentioned herein may be trademarks of their respective owners.