UMW TPD1E05U06DPYR

1.Features

- 45W peak pulse power (t_p=8/20μs)
- Tiny X1SON-2 package
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (C_j=0.7pF typ.)
- Protection one data/power line
- IEC 61000-4-2 ±10kV contact ±15kV air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A(8/20μs)

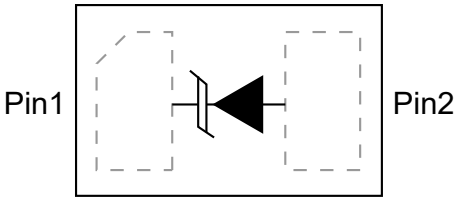
2.Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

3.Mechanical Data

- X1SON-2 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

4.Pinning information



X1SON-2

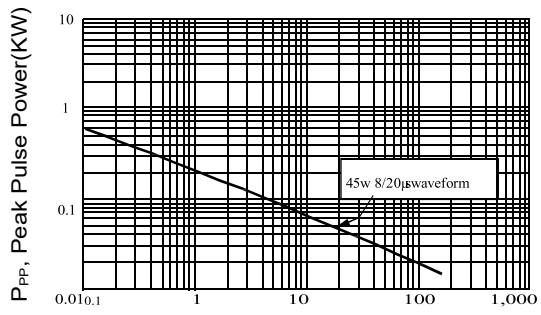
5.Absolute Maximum Rating

Parameter	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μs)	P_{PP}	45	W
Peak Pulse Current (t_p=8/20μs)(note1)	I_{PP}	3.5	A
ESD per IEC 61000-4-2(Air)	V_{ESD}	15	kV
ESD per IEC 61000-4-2(Contact)		10	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to 125	°C
Storage Temperature	T_{STG}	-55 to 125	°C

6.Electrical Characteristics

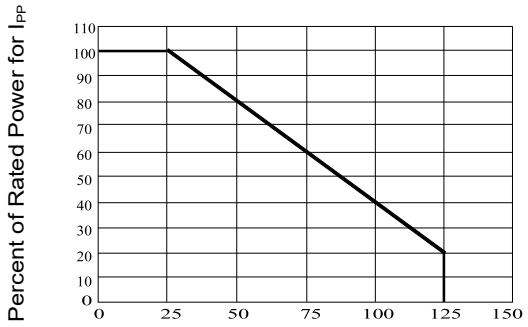
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6	7.5		V
Reverse Leakage Current	I_R	V_{RWM}=5V, T=25°C		0.1	0.5	μA
Peak Pulse Current	I_{PP}	t_p=8/20μs			3.5	A
Clamping Voltage	V_C	I_{PP}=3.5A, t_p=8/20μs		12	15	V
Junction capacitance	C_J	V_R=0V, f=1MHz		0.7	0.9	pF

7.Typical characteristic



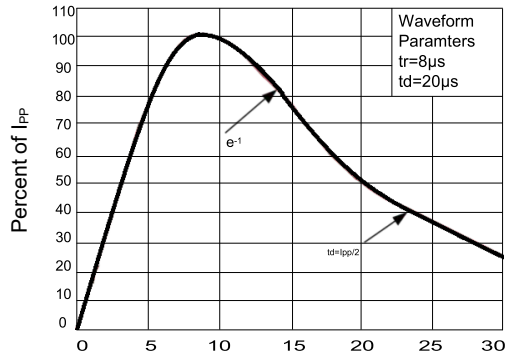
t_d, Pulse Duration(μs)

Figure 1: Peak Pulse Power vs. Pulse Time



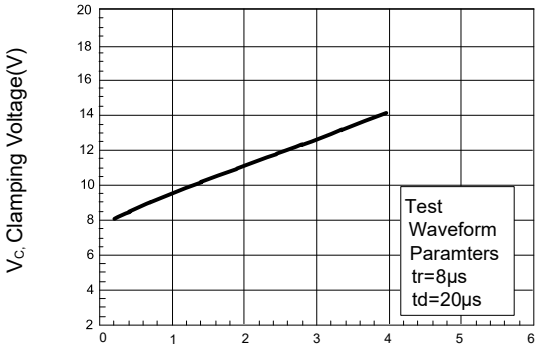
$T_{A,}$ Ambient Temperature(°C)

Figure 2: Power Derating Curve



Time (μs)

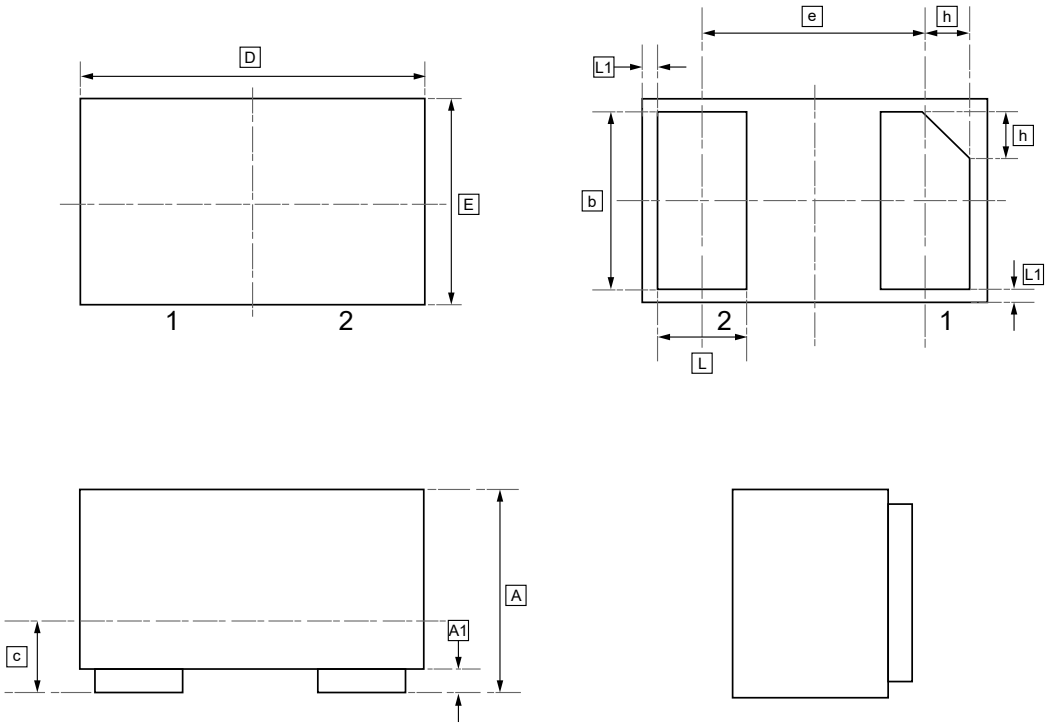
Figure 3: Pulse Waveform



$I_{PP,}$ Peak Pulse Current (A)

Figure 4: Clamping Voltage vs.I_{PP}

8.X1SON-2 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	b	c	D	e	E	L	L1	h
Min	0.45	0.00	0.45	0.12	0.95	0.65	0.55	0.20	0.05	0.07
Max	0.55	0.05	0.55	0.18	1.05	BSC	0.65	0.30	REF	0.17

9.Ordering information

Order Code	Package	Base QTY	Delivery Mode
UMW TPD1E05U06DPYR	X1SON-2	10000	Tape and reel

10.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.

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