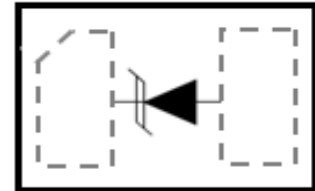


## Features

- 45W peak pulse power ( $t_p = 8/20\mu s$ )
- 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  $\pm 10kV$  contact  $\pm 15kV$  air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A(8/20 $\mu s$ )



## Applications

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

## Mechanical Data

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

## Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	45	W
Peak Pulse Current ( $t_p = 8/20\mu s$ )(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	
Lead Soldering Temperature	$T_L$	260/10S	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to + 125	$^{\circ}C$

## Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	6.0	7.5		V
Reverse Leakage Current	$I_R$	$V_{RWM}=5\text{V}, T=25^\circ\text{C}$		0.1	0.5	$\mu\text{A}$
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu\text{s}$			3.5	A
Clamping Voltage	$V_C$	$I_{PP}=3.5\text{A}, t_p=8/20\mu\text{s}$		12	15	V
Junction Capacitance	$C_j$	$V_R = 0\text{V}, f = 1\text{MHz}$		0.7	0.9	pF

## Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

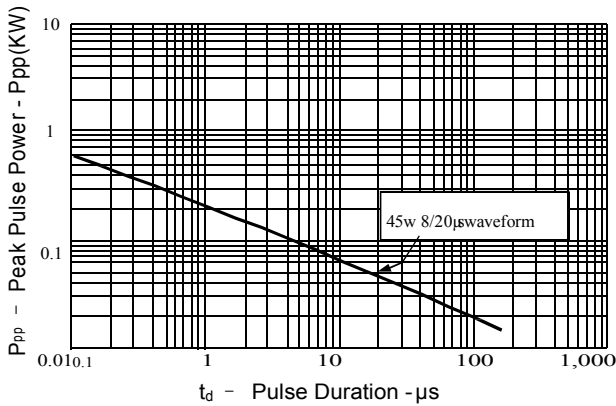


Figure 2: Power Derating Curve

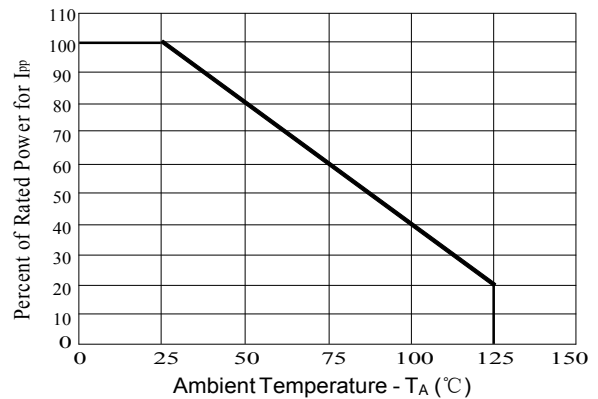


Figure 3: Pulse Waveform

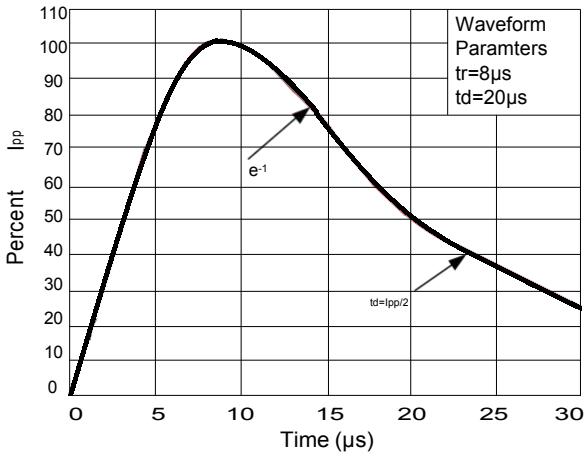
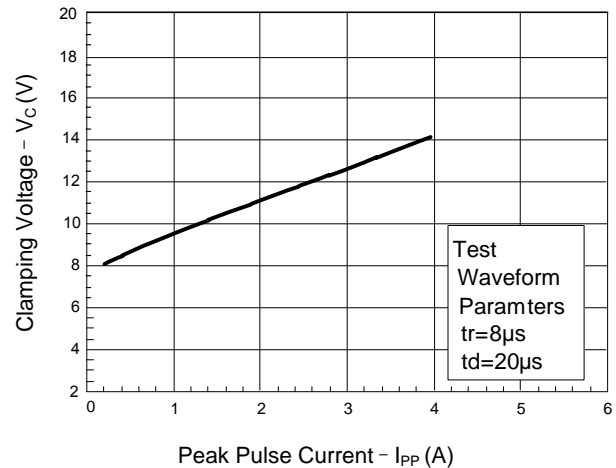
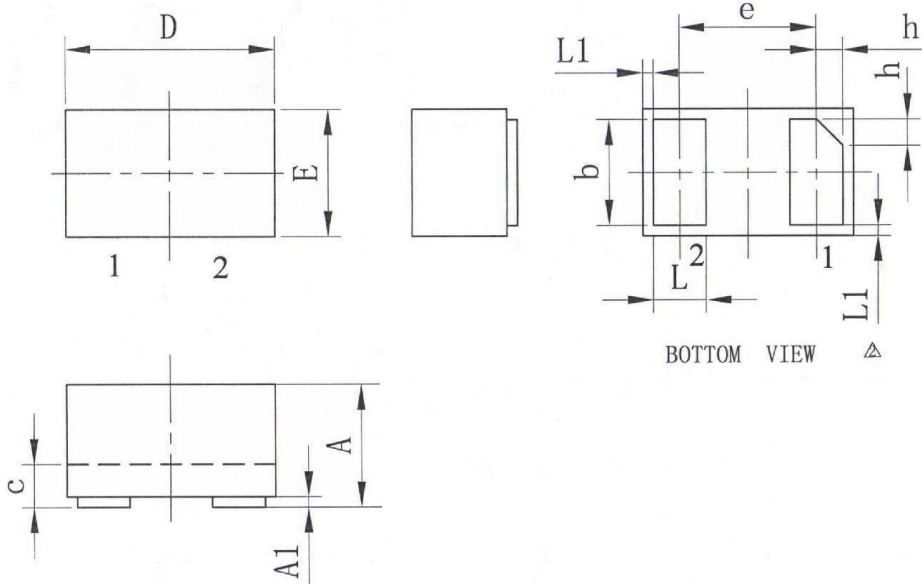


Figure 4: Clamping Voltage vs. I\_pp

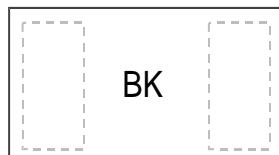


### Outline Drawing -X1SON-2



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0	0.02	0.05
b	0.45	0.50	0.55
c	0.12	0.15	0.18
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.05REF		
h	0.07	0.12	0.17
载体尺寸 (M1)	20*20		

### Marking



### Ordering information

Order code	Package	Baseqty	Deliverymode
TPD1E05U06DPYR	X1SON-2	10000	Tape and reel