Features
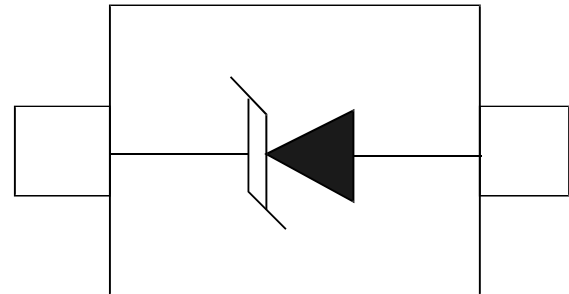
■ 360W peak pulse power (tp = 8/20μs)

■ Unidirectional configurations

■ Solid-state silicon-avalanche technology

■ Low clamping voltage

■ Low leakage current

■ IEC 61000-4-2 ±30kV contact ±30kV air

■ IEC 61000-4-4 (EFT) 40A (5/50ns)

■ IEC 61000-4-5 (Lightning) 20A (8/20μs)

SOD-323

Applications

■ USB Vbus,

■ Power Line

■ Power management

Mechanical Data

■ SOD323 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 =8/20μs)	P_{PP}	360	W
Peak Pulse Current (t_p =8/20μs) (note1)	I_{pp}	20	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 150	℃
Storage Temperature	T_{stg}	-55 to + 150	℃

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=1mA	6.0			V
Reverse Leakage Current	I_R	V_{RWM}=5V,T=25℃			1	uA
Clamping Voltage	V_C	I_{PP}=20A,t_p=8/20μs		17	19	V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		120	135	pF

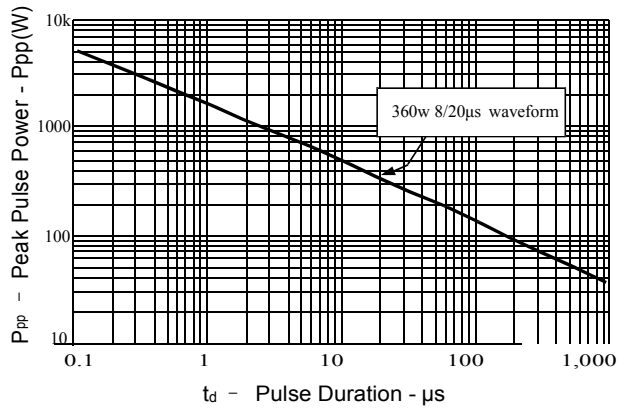## Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

Figure 2: Power Derating Curve

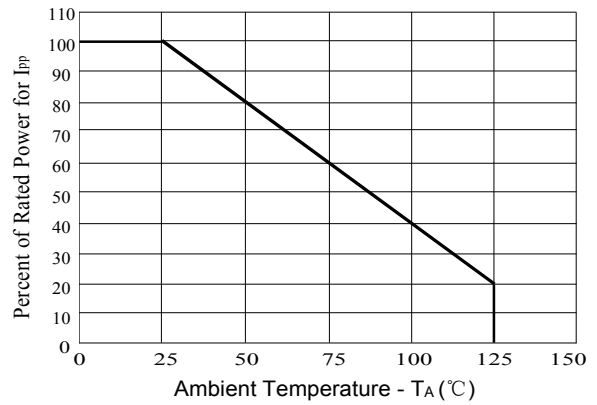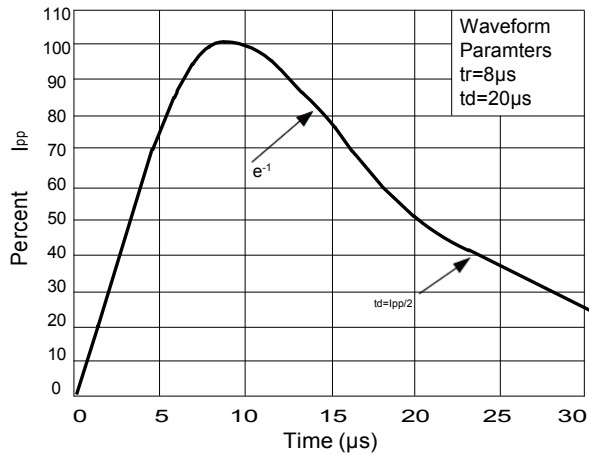**Figure3: Pulse Waveform**
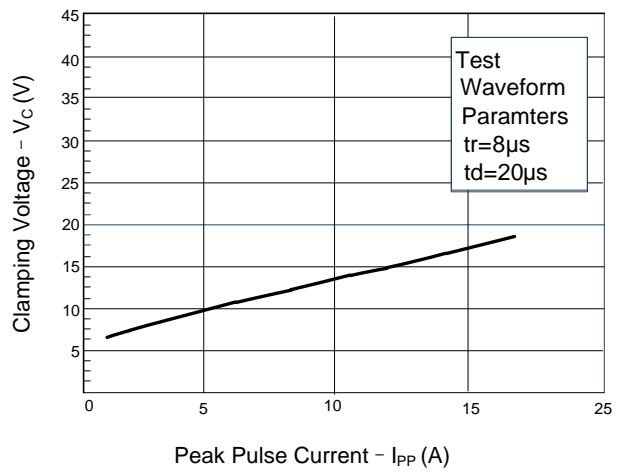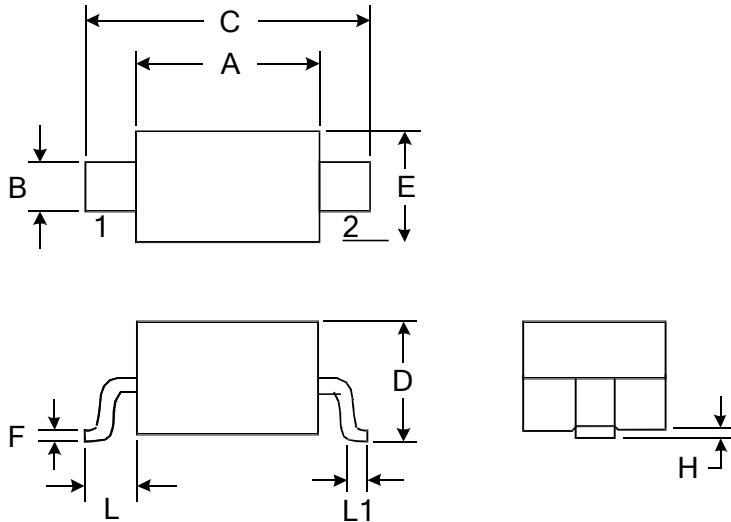

Figure 4: Clamping Voltage vs.Ipp
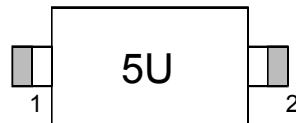
Outline Drawing – SOD323

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.500	2.700	0.098	0.106
D		1.000		0.039
E	1.200	1.400	0.047	0.055
F	0.080	0.150	0.003	0.006
L	0.475 REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Marking

5U

Ordering information

Order code	Package	Base qty	Delivery mode
SD05.TCT	SOD-323	3000	Tape and reel