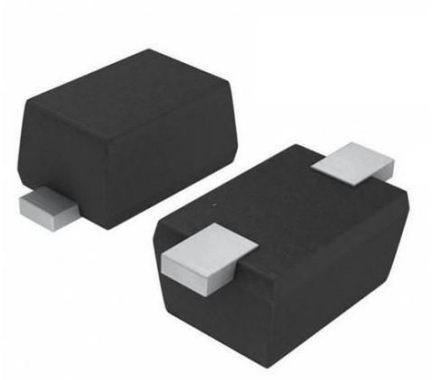
BORN 伯恩半导体 BORN SEMICONDUCTOR

UClamp0501H-N

ESD Protection Diode Array

»Features

- 250Watts 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) 15A(8/20μs)



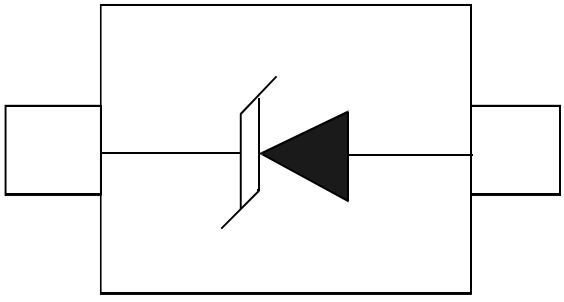
»Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

»Mechanical Data

- SOD523 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

»Schematic & PIN Configuration



SOD-523

»Absolute Maximum Rating

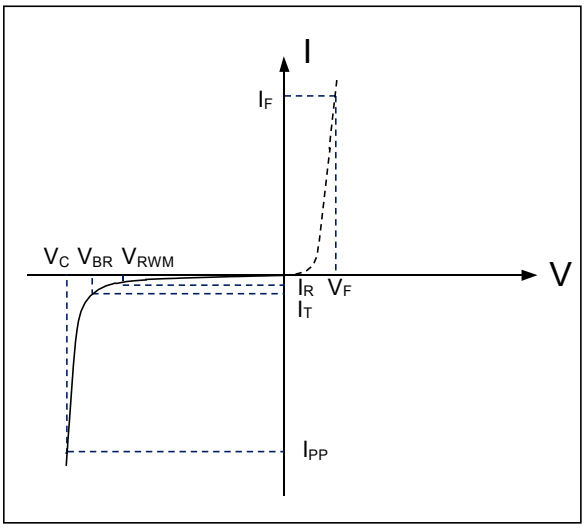
Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	250	Watts
Peak Pulse Current (t_p =8/20μs)(note1)	I_{pp}	15	A
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 150	℃
Storage Temperature	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}=5.0V,T=25℃			0.5	uA
Clamping Voltage	V_C	I_{PP}=15A,t_p=8/20μs		12	18	V
Junction Capacitance	C_j	V_R = 0V, f =1MHz		80		pF

»Electrical Parameters (TA = 25°C unless otherwisenoted)

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



Note:. 8/20μs pulsewaveform.

»Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

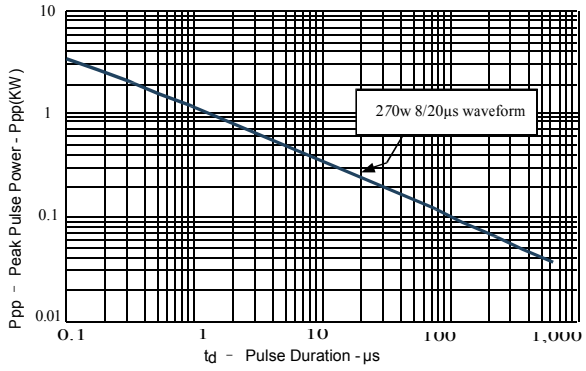


Figure 2: Power Derating Curve

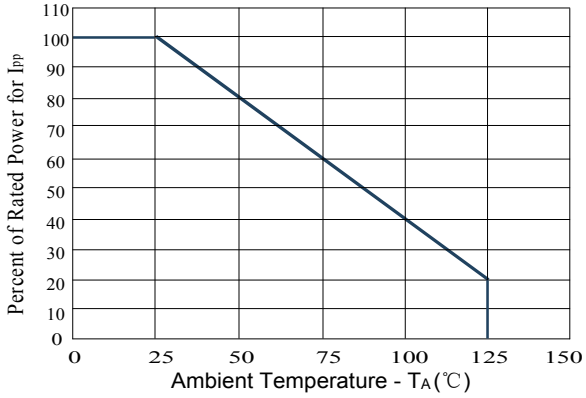


Figure3: Pulse Waveform

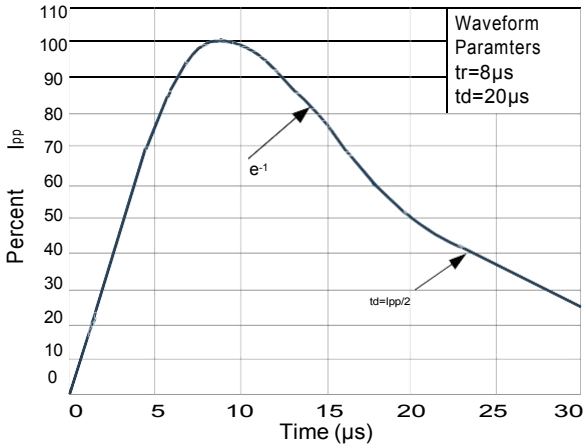
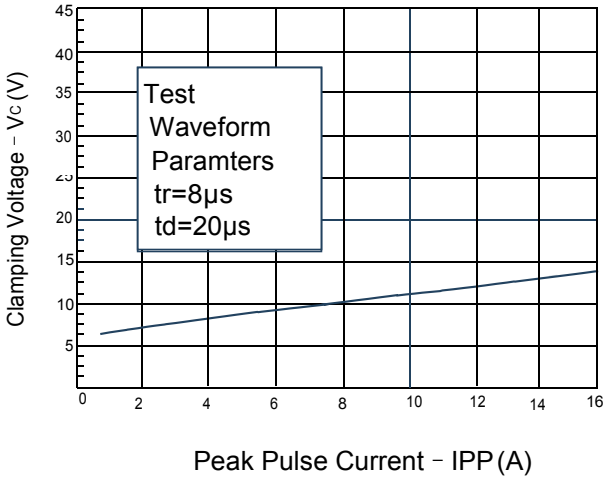
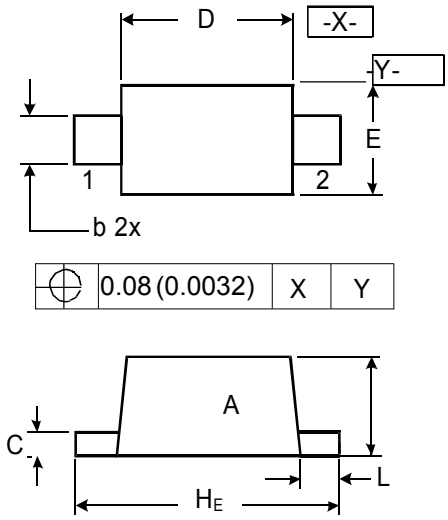


Figure 4: Clamping Voltage vs.Ipp



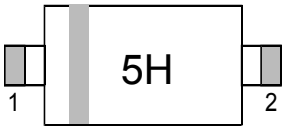
»Outline Drawing – SOD523



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H_E	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

»Marking



»Ordering information

Order code	Package	Base qty	Delivery mode
UClamp0501H-N	SOD523	5000	Tape and reel

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

BORN:

BDFN1C031V BDFN2C031V 1.5SMBJ40CA 5.0SMDJ15CA P4SMA6.8CA S8550 BN5A181V45 BSD3A241V MMBZ27VCLT1G-N MMBZ39VCLT1G-N SMD2920-400/30N BAT46X BML6401 BSD3A031V SMFJ170A 1.5SMBJ18CA BST23A052U ESDA14V2L SM24CANB-02HTG-N 1N4148WT BSD3C031LX BSD9C051V GBLC03C-N PESD15VL1BA-N PSD24-N BC858B BM3134E BWF102N GBJ1510 1.0SMBJ6.5A