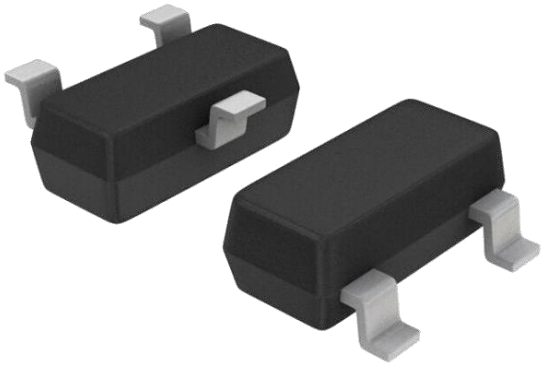
BORN 伯恩半导体 BORN SEMICONDUCTOR

MMBZ5V6ALT1G-N

ESD Protection Diode Array

»Features

- 350 Watts 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)



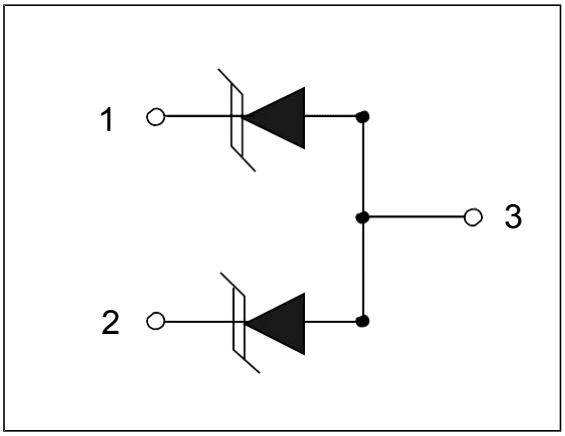
»Applications

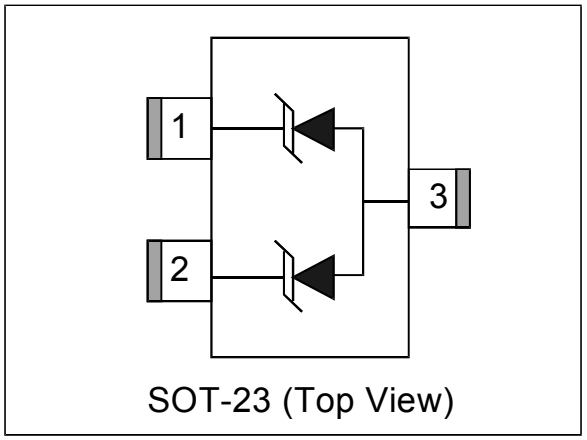
- Dataline
- Automatic Teller Machines
- Net works
- Power line

»Mechanical Data

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

»Schematic & PIN Configuration





»Absolute Maximum Rating

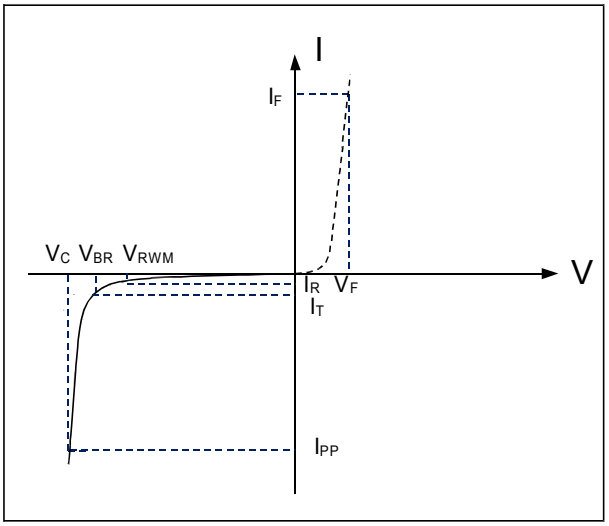
Rating	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μs)	P_{PP}	350	Watts
Peak Pulse Current (t_p=8/20μs) (note1)	I_{pp}	20	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{stg}	-55 to + 125	℃

»Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	4.0	6.5	8.0	V
Reverse Leakage Current	I_R	V_{RWM}=3V,T=25℃		0.1	0.5	μA
Peak Pulse Current	I_{PP}	tp =8/20μs			20	A
Clamping Voltage	V_C	I_{PP}=20A,t_p=8/20μs			16	V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz (pin 1、pin2 to pin 3)		200		pF

»Electrical Parameters (TA = 25°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



Note:. 8/20μs pulsewaveform.

»Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

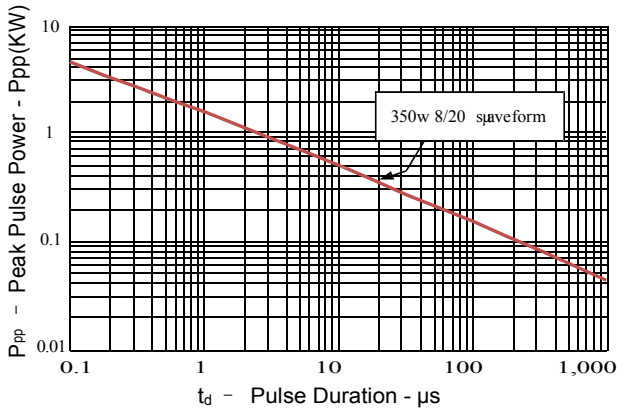


Figure 2: Power Derating Curve

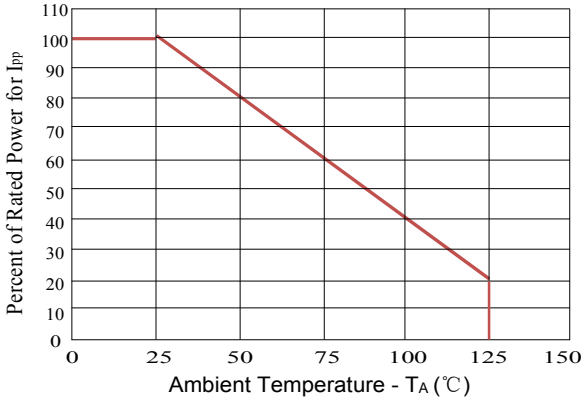


Figure3: Pulse Waveform

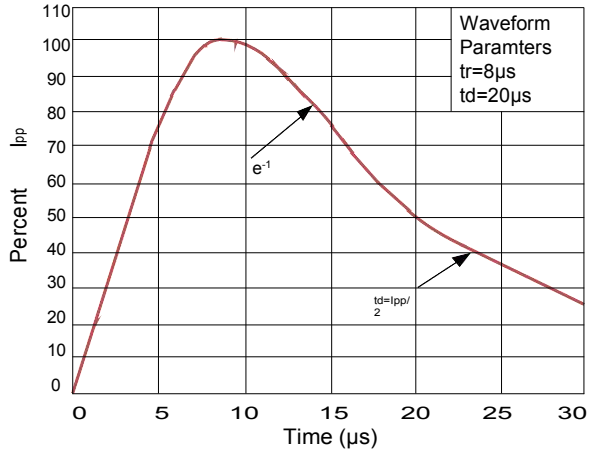
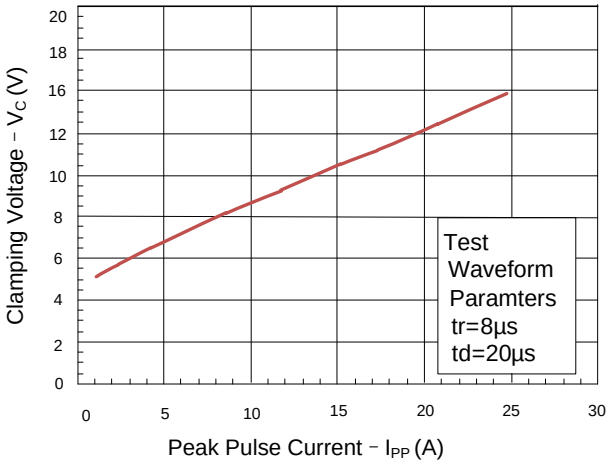
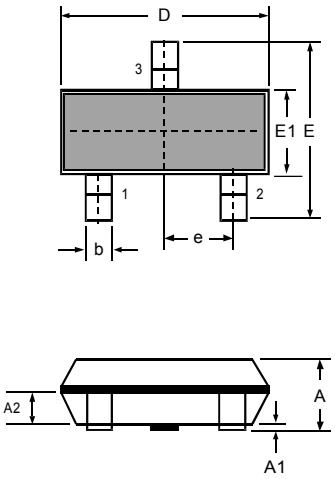
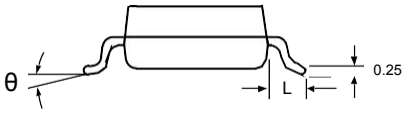


Figure 4: Clamping Voltage vs.Ipp



»Outline Drawing – SOT-23

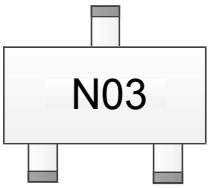




DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
θ	0	8°	0	8°

»Marking



»Ordering information

Order code	Package	Base qty	Delivery mode
MMBZ5V6ALT1G-N	SOT-23	3k	Tape and reel

Unikeyic Electronics

Global Electronic Components Distributor

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

BORN:

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