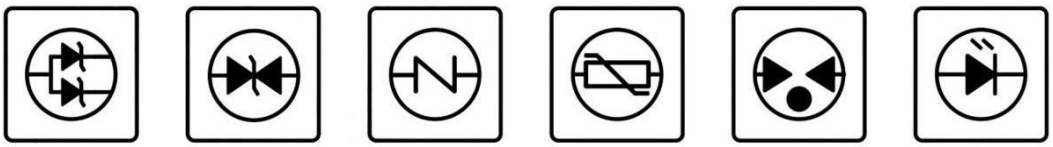
MSKSEMI 美森科
SEMICONDUCTOR



ESDA5V3L-MS

Product specification

Features

- 150 Watts peak pulse power (tp = 8/20μs)
- Unidirectional and unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection two data lines:
- IEC 61000-4-2 ±8kV contact ±15kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 10A (8/20μs)

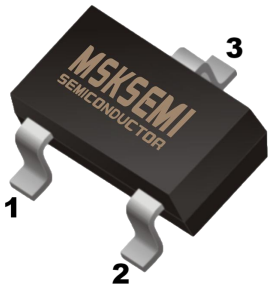
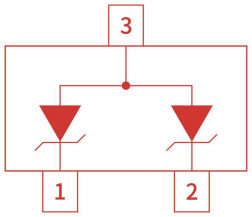
Application

- 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

Reference News

PACKAGE OUTLINE	Schematic&PINConfiguratio	Marking
		EL53
SOT-23		

Absolute Maximum Rating

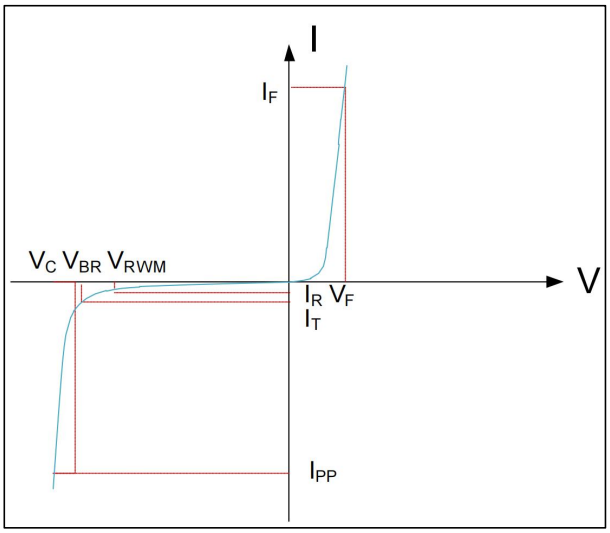
Rating	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μs)	P_{PP}	150	Watts
Peak Pulse Current (t_p=8/20μs) (note1)	Ipp	10	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	15 8	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{stg}	-55 to + 125	℃

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6			V
Reverse Leakage Current	I_R	V_{RWM}=5V,T=25℃		0.5	1	μA
Peak Pulse Current	I_{PP}	tp =8/20μs			10	A
Clamping Voltage	V_C	I_{PP}=10A,t_p=8/20μs		15		V
Junction Capacitance	C_j	V_R= 0V, f= 1MHz (PIN1 to PIN3)		100		pF

Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
PP	Maximum Reverse Peak Pulse Current
C	Clamping Voltage @ IPP
RWM	Working Peak Reverse Voltage
R	Maximum Reverse Leakage Current @ VRWM
BR	Breakdown Voltage @ IT
T	Test Current



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

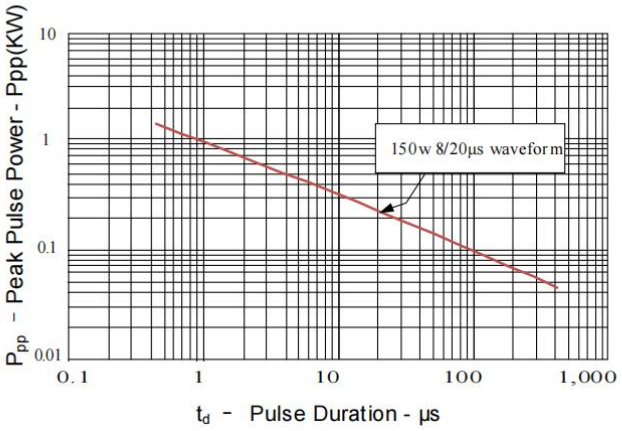


Figure 2: Power Derating Curve

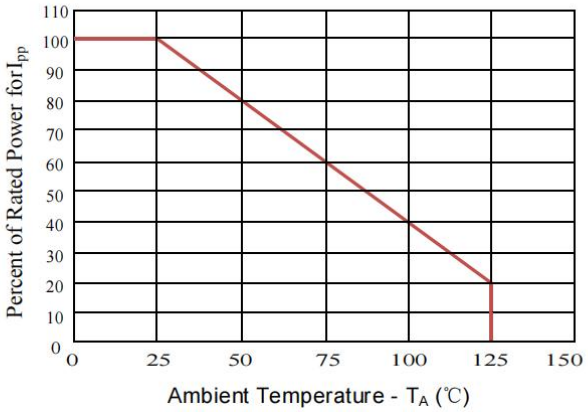


Figure3: Pulse Waveform

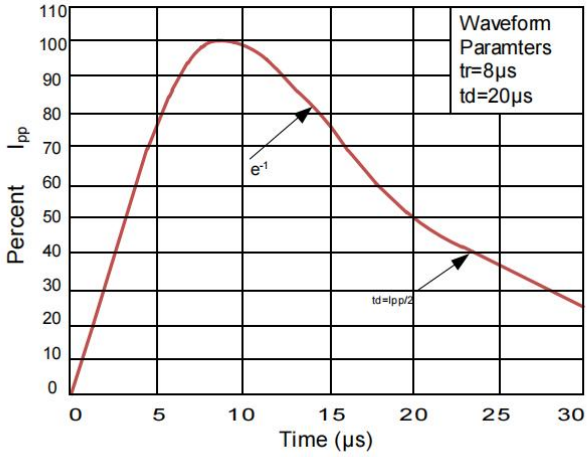
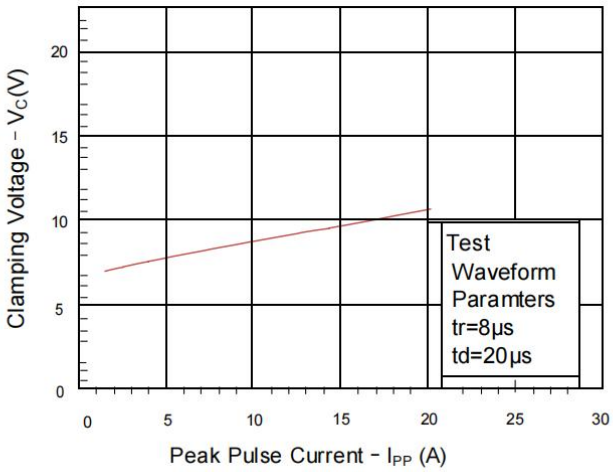
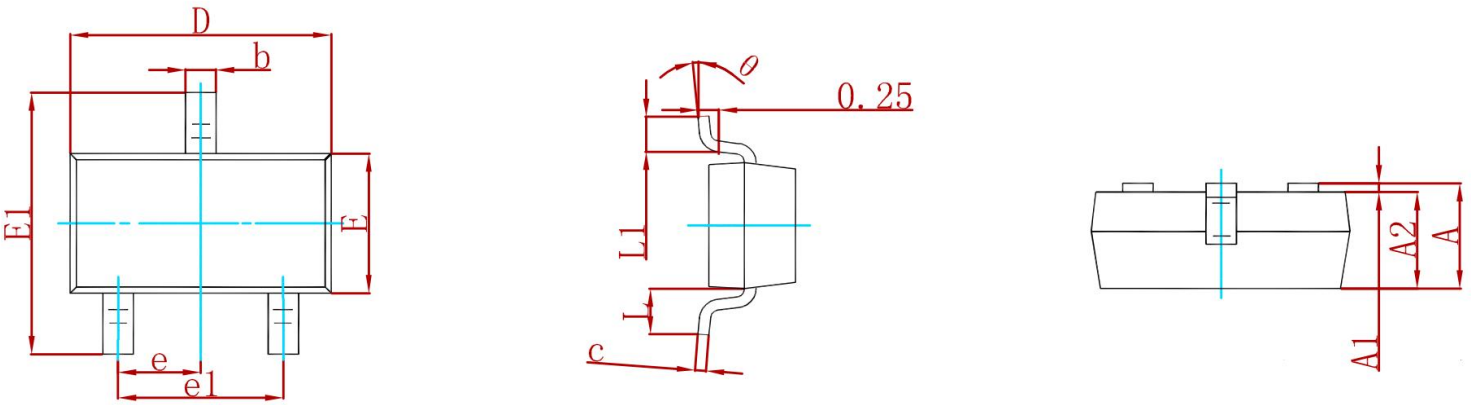


Figure 4: Clamping Voltage vs.Ipp

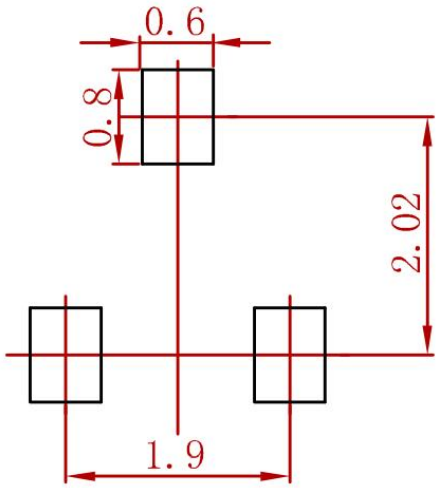


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In 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
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:

1.Controlling dimension:in millimeters.

2.General tolerance:±0.05mm.

3.The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
ESDA5V3L-MS	SOT-23	3000

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