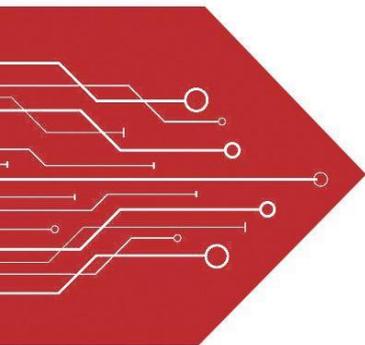


MSKSEMI

SEMICONDUCTOR



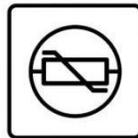
ESD



TVS



TSS



MOV



GDT

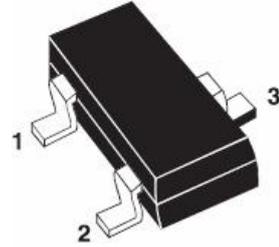


PLED

Product data sheet

Features

- 2 Unidirectional Transil functions
- Low leakage current: $I_{RM} \max < 1 \mu A$ at V_{RM}
- 300W peak pulse power(8/20 μ s)



Complies with the following standards

IEC61000-4-2

Level 4 15 kV (air discharge)

8 kV(contact discharge)

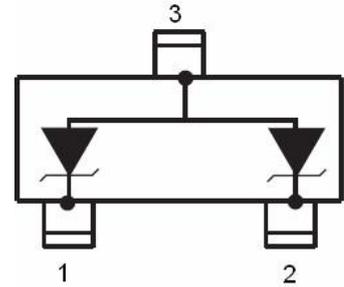
MIL STD 883E - Method 3015-7 Class 3

25 kV HBM (Human Body Model)

Applications

- Computers
- Printers
- Communication systems

It is particularly recommended for the RS232 I/O port protection where the line interface withstands only with 2kV ESD surges.



SOT-23

Electrical Characteristics

P/N	V_{BR} @		I_R	I_{RM} @ V_{RM}		R_d typ. note 1	αT max. note 2	C typ. 0V bias	V_F @ I_F	
	min.	max.		max.					max.	mA
	V	V	mA	μA	V	$10^{-4}/^{\circ}C$	V			
ESDA5V3L-MS	5.3	5.9	1	2	3	280	5	220	1.25	200
ESDA6V1L-MS	6.1	7.2	1	20	5.25	350	6	140	1.25	200
ESDA14V2L-MS	14.2	15.8	1	5	12	650	10	90	1.25	200
ESDA25L-MS	25	30	1	1	24	1000	10	50	1.2	10

note 1 : Square pulse $I_{pp} = 15A$, $t_p=2.5\mu s$.

note 2 : $\Delta V_{BR} = \alpha T^* (T_{amb} - 25^{\circ}C) * V_{BR} (25^{\circ}C)$

Absolute Ratings ($T_{amb}=25^{\circ}C$)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power ($t_p = 8/20\mu s$)	300	W
T_L	Maximum lead temperature for soldering during 10s	260	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55 to +155	$^{\circ}C$
T_{op}	Operating Temperature Range	-40 to +125	$^{\circ}C$
T_j	Maximum junction temperature	150	$^{\circ}C$
V_{PP}	Electrostatic discharge		
	MIL STD 883C -Method 3015-6	25	kV
	IEC61000-4-2 air discharge	15	
	IEC61000-4-2 contact discharge	8	

Electrical Parameter

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}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T

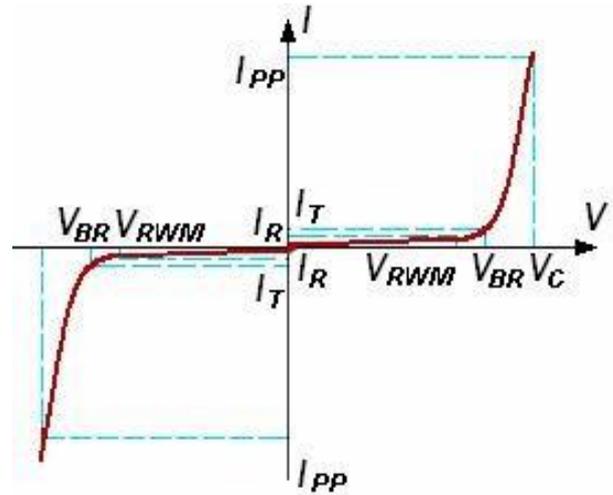


FIG1: Pulse Waveform

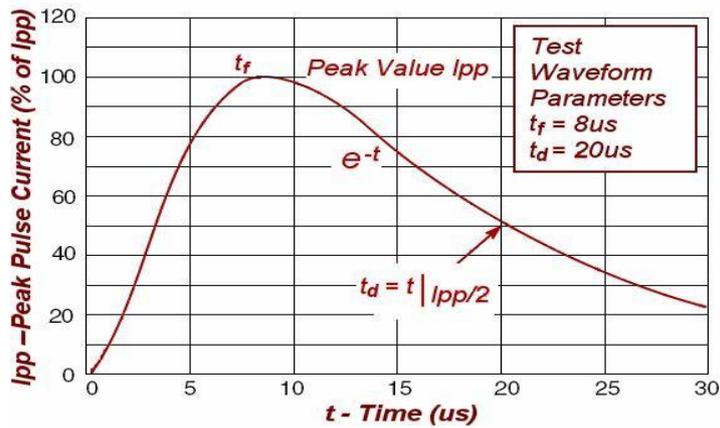
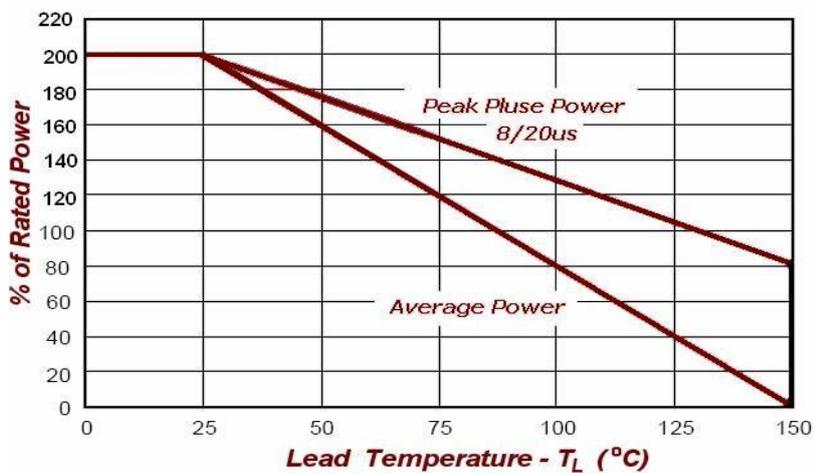
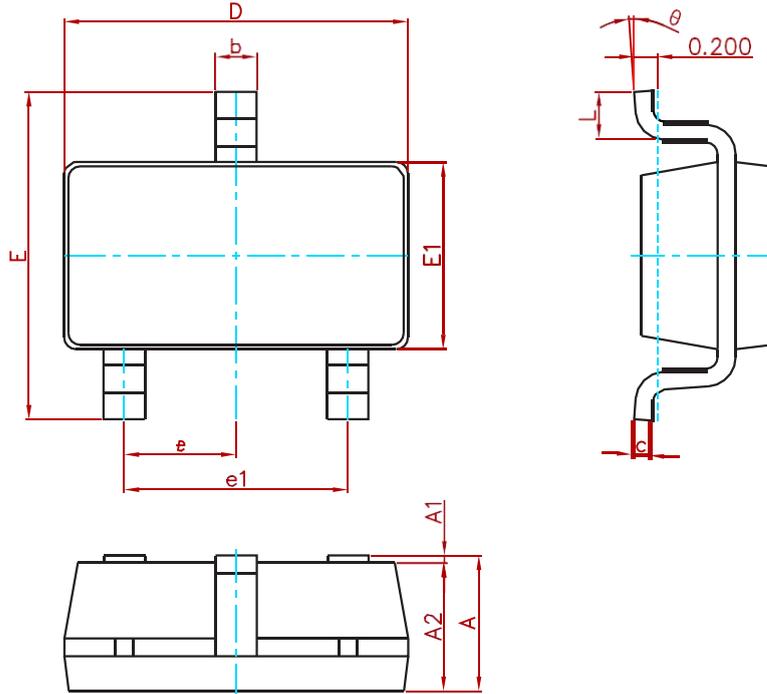


FIG2: Power Derating

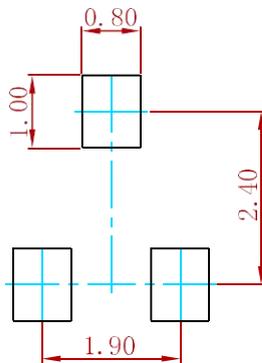


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
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
ESDAXXXL-MS	SOT-23	3000

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