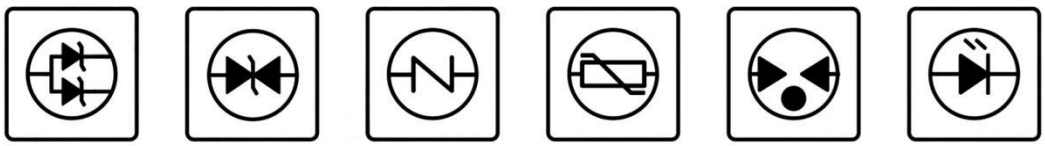
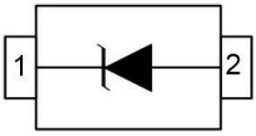
MSKSEMI
SEMICONDUCTOR



Product data sheet

Features

- 250 Watts peak pulse power (tp = 8/20μs)
- Transient protection for high speed data lines to
  IEC 61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
  IEC 61000-4-4 (EFT) 40A (5/50ns)
- Protects One Power or I/O Port
- Low operating and clamping voltages
- Solid-state silicon avalanche technology



SOD-523

Applications

- Notebooks, Desktops, Servers and Video Graphics Cards
- USB Power & Data Line Protection
- Monitors and Flat Panel Displays
- I²C Bus Protection
- Portable Instrumentation
- Set Top Box

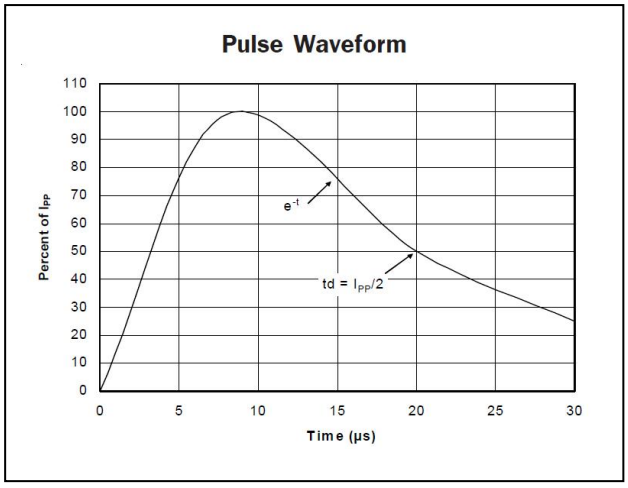
Maximum Rating @ Ta=25℃ unless otherwise specified

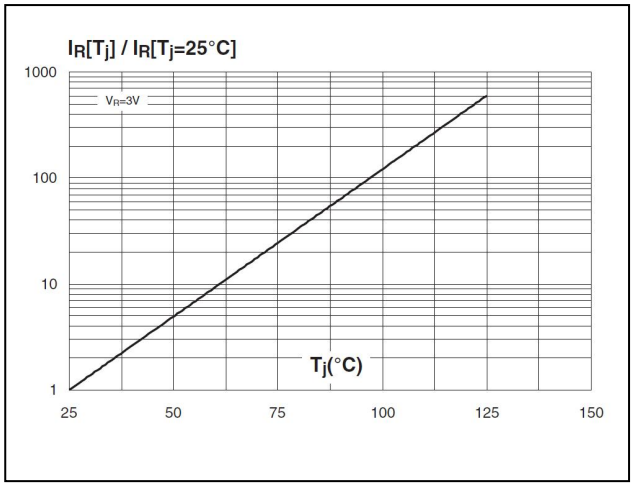
Symbol	Parameter	Ratings	Units
P_{PK}	Peak Pulse Power (tp = 8/20μs)	250	Watts
T_L	Lead Soldering Temperature	260(10sec.)	℃
T_J	Operating Temperature	-55 to +125	℃
T_{STG}	Storage Temperature	-55 to +150	℃

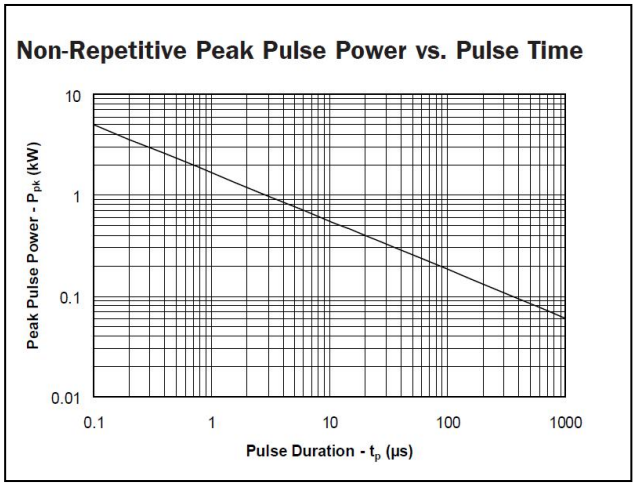
Electrical Characteristics@ Ta=25℃ unless otherwise

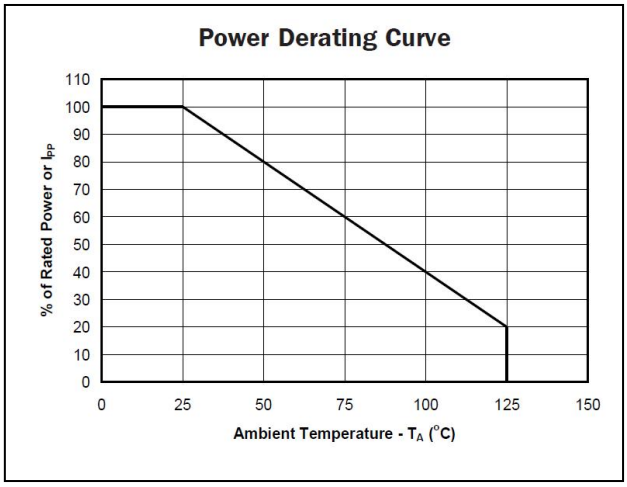
P/N	V_{RWM} @IR		V_{BR}@ImA	V_C@1	V_C@IPP		C_J
	V	μA	V	V	V	A	pF
		MAX	MIN	MAX	MAX		MAX
ESD3V3S1UB-MS	3.3	1	4	9.8	13	12	120
ESD5V0S1UB-MS	5	1	5.8	11.8	15	10	100
ESD7V0S1UB-MS	7	1	7.5	14	19	8	80
ESD12VS1UB-MS	12	1	13.3	19	25	6	70
ESD15VS1UB-MS	15	1	16.5	24	33	5	50
ESD24VS1UB-MS	24	1	26.1	44	54	3	30
ESD36VS1UB-MS	36	1	38.2	62	80	3	30

Typical Characteristics@ Ta=25℃ unless otherwise specified



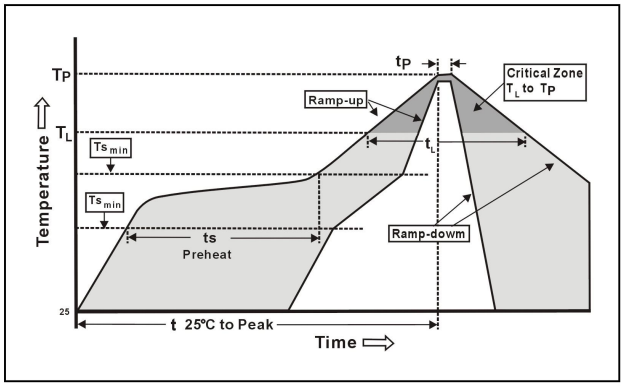




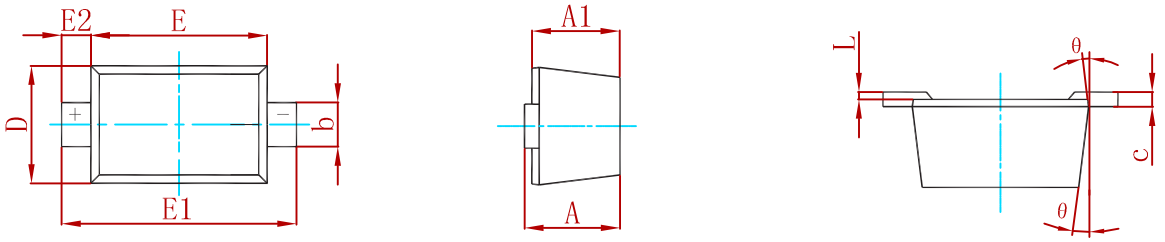


Soldering Parameters

Reflow Condition		Fb – Free assembly
Pre Heat	-Temperature Min ($T_{s(Min)}$)	150°C
	-Temperature Max ($T_{s(Max)}$)	200°C
	-Time (Min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{S(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		$250^{+0/-5}$ °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-dowm Rate		6°C/second Max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		260°C

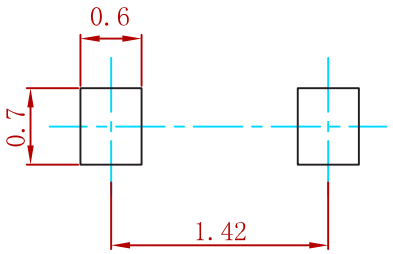


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

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
ESDXXXS1UB-MS	SOD-523	3000

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