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SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

ESDXXXL2BT-MS

Product specification

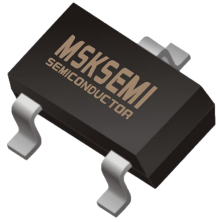
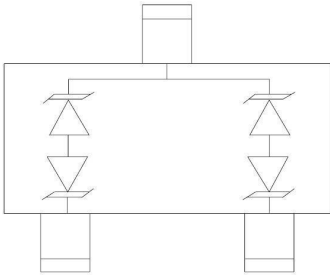
FEATURES

- 300 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)
- Working voltages : 3V,5V,12V,15V,24V
- Protects two bidirectional line
- Low operating and clamping voltages
- Solid-state silicon avalanche technology

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

Reference News

PACKAGE OUTLINE	PIN CONFIGURATION
 <p>SOT-23</p>	

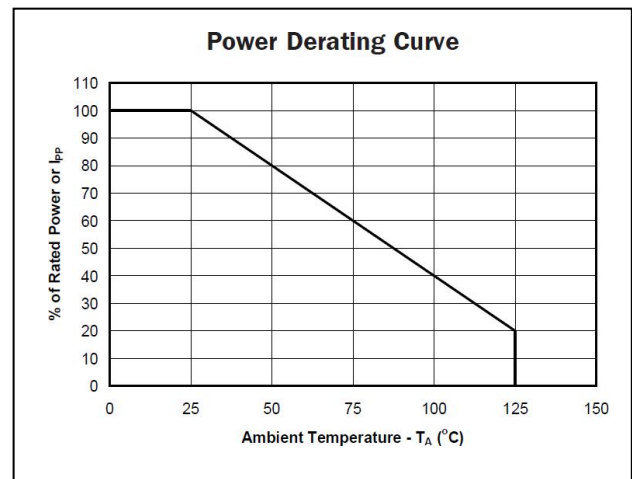
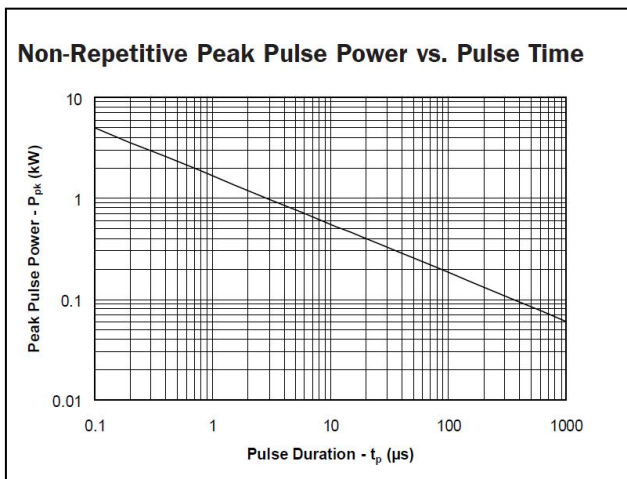
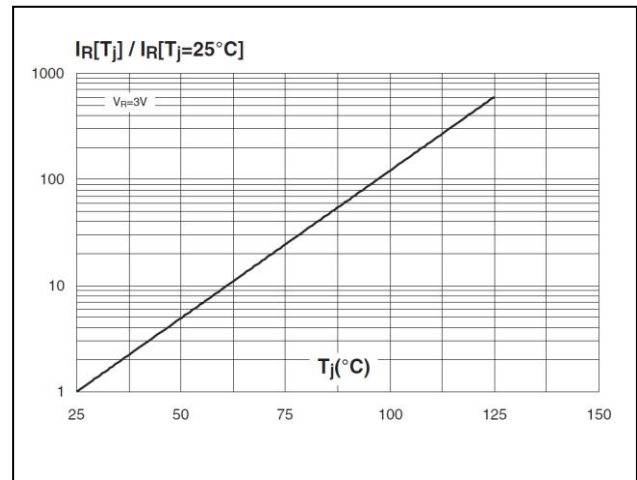
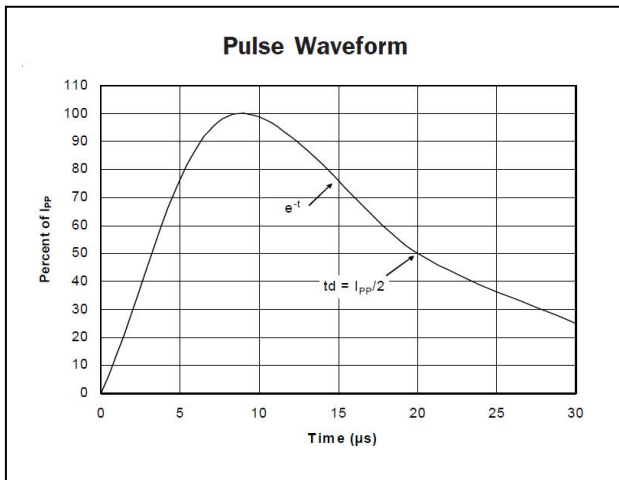
Maximum Rating @ Ta=25°C unless otherwise specified

Symbol	Parameter	Ratings	Units
P _{PK}	Peak Pulse Power (tp = 8/20μs)	300	Watts
T _L	Lead Soldering Temperature	260(10sec.)	°C
T _J	Operating Temperature	-55 to +125	°C
T _{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics@ Ta=25°C unless otherwise

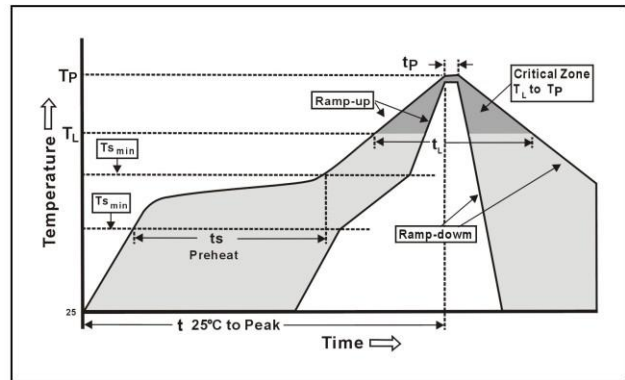
PART NUMBER	MARKING	V _{RWM} (V) (max.)	V _B (V) (min.)	I _r (mA)	V _{C@1A} (V) (max.)	V _C (V) (max.) (@A)	I _r (μA) (max.)	C _T (pF) (max.)	
ESD3V3L2BT-MS	V3**	3.3	4	1	7.0	14	18	0.1	100
ESD5V0L2BT-MS	V4**	5	6	1	9.8	18	13	0.1	75
ESD12VL2BT-MS	V5**	12	13.3	1	19	32	5	0.1	20
ESD15VL2BT-MS	V6**	15	16.7	1	24	38	5	0.1	20
ESD24VL2BT-MS	V7**	24	26.7	1	43	52	5	0.1	35

Typical Characteristics@ Ta=25°C unless otherwise specified

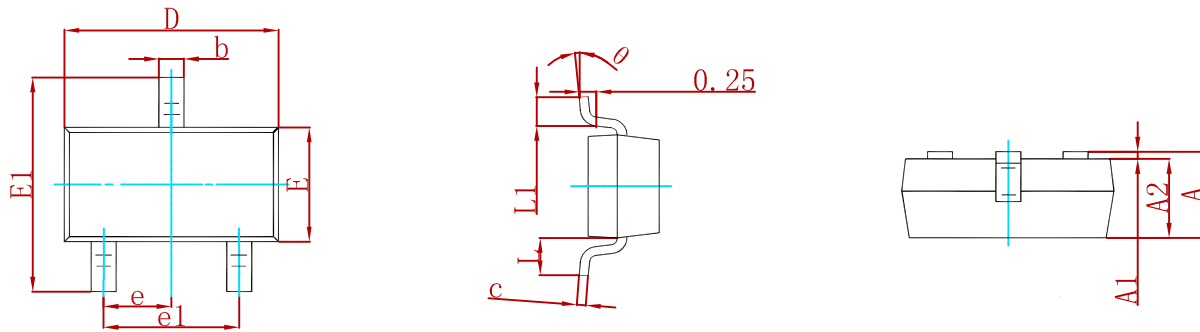


Soldering Parameters

Reflow Condition		Fb – Free assembly
Pre Heat	- Temperature Min ($T_{s(\text{Min})}$)	150°C
	- Temperature Max ($T_{s(\text{Max})}$)	200°C
	- Time (Min to max) (t_p)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{s(\text{Max})}$ 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-down Rate		6°C/second Max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C

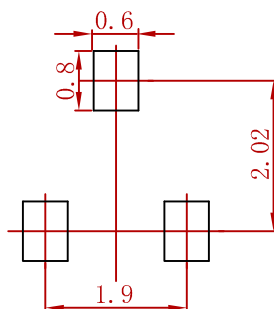


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	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: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
ESDXXXL2BT-MS	SOT-23	3000

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