

MSKSEMI

SEMICONDUCTOR



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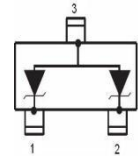
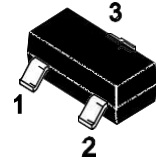
PLED

Product data sheet

www.msksemi.com

FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- 2 Unidirectional transil functions
- Low leakage current: $I_R \text{ max} < 20 \mu\text{A}$ at VRM
- 300W peak pulse power(8/20 μs)
- Transient protection for data lines as per IEC61000-4-2(ESD) 15KV(air)8KV(contact) IEC61000-4-5(Lightning) see IPPM below



SOT-23

APPLICATIONS

- Computers
- Printers
- Communication systems

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

P/N	V _{BR}			I _T	V _{RWM}	I _R	C
	Min.	Typ.	Max.				Typ. 0v bias
	V	V	V				pF
SM05T1G-MS	6.0	6.7	7.4	1	5.0	1	30
SM12T1G-MS	13.3	14.0	14.7	1	12.0	1	25
SM15T1G-MS	16.7	17.4	18.1	1	15.0	1	25
SM24T1G-MS	26.7	28.2	29.6	1	24.0	1	20

1).8/20 waveform used. (see fig2.)

ABSOLUTE RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Peak Pulse Power (tp = 8/20 μs)	PPP	300	W
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	°C
Storage Temperature Range	Tstg	-55 ~ +150	°C
Operating Temperature Range	Top	-40 ~ +125	°C
Maximum junction temperature	Tj	150	°C
Electrostatic discharge	VPP		kV
IEC61000-4-2 air discharge		15	
IEC61000-4-2 contact discharge		8	

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Symbol	Parameter
VRM	Stand-off voltage
VBR	Breakdown voltage
VCL	Clamping voltage
IRM	Leakage current
IPPM	Peak pulse current

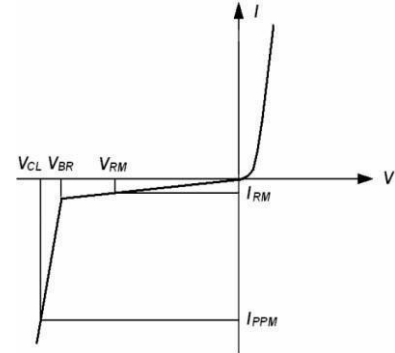


FIG1: Pulse Waveform

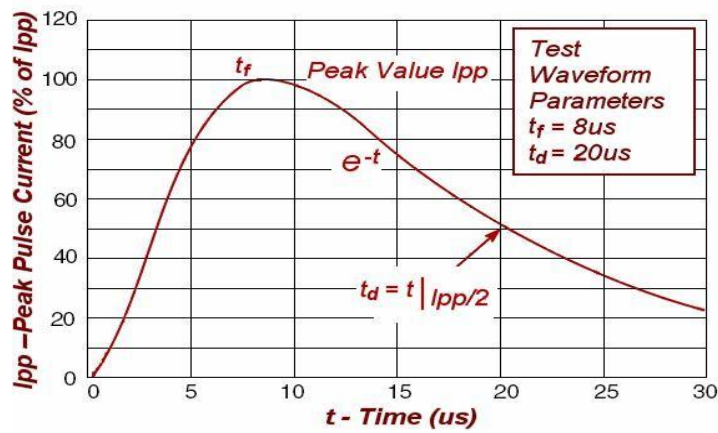
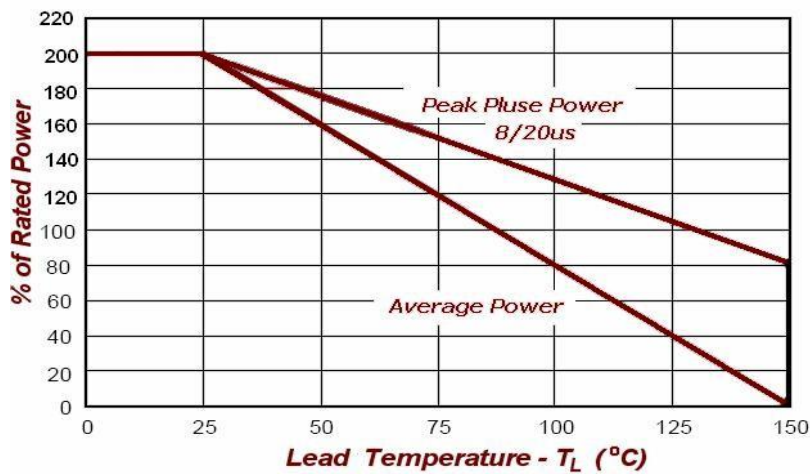
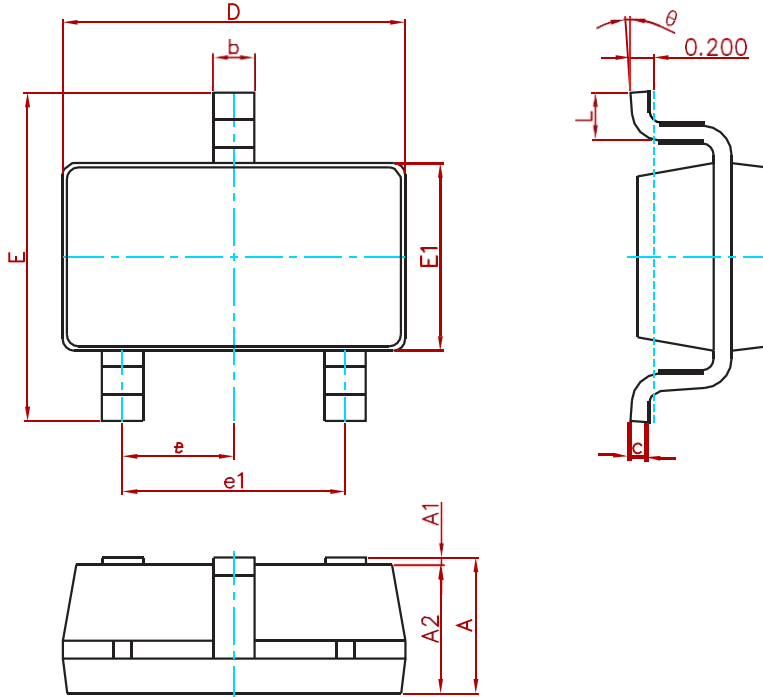


FIG2: Power Derating

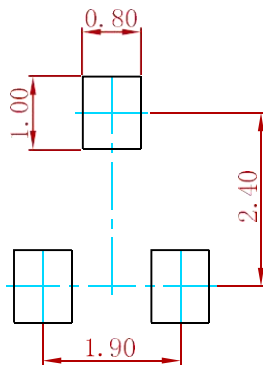


PACKAGE MECHANICAL DATA



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
theta	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
SMXXT1G-MS	SOT-23	3000

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