

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

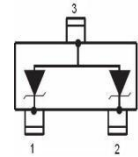
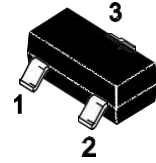


PLED

Product data sheet

**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:  $I_R \max < 20 \mu A$  at VRM
- 300W peak pulse power(8/20 $\mu s$ )
- 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 <sub>BR</sub>			I <sub>T</sub>	V <sub>RWM</sub>	I <sub>R</sub>	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

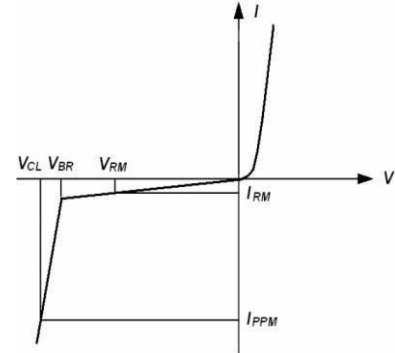
1).8/20 waveform used. (see fig2.)

**ABSOLUTE RATINGS(Ta = 25°C)**

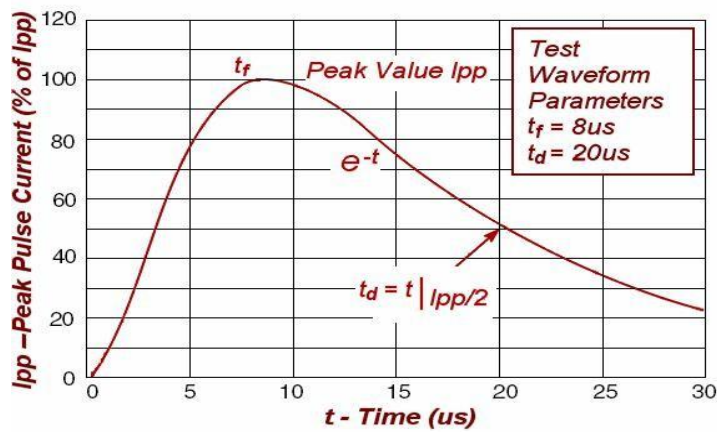
Parameter	Symbol	Limits	Unit
Peak Pulse Power (tp = 8/20 $\mu s$ )	PPP	300	W
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	°C
Storage Temperature Range	Tstg	-55 ~ +150	°C
Operating Temperature Range	Top	-40 ~ +125	°C
Maximum junction temperature	Tj	150	°C
Electrostatic discharge	VPP	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

**ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

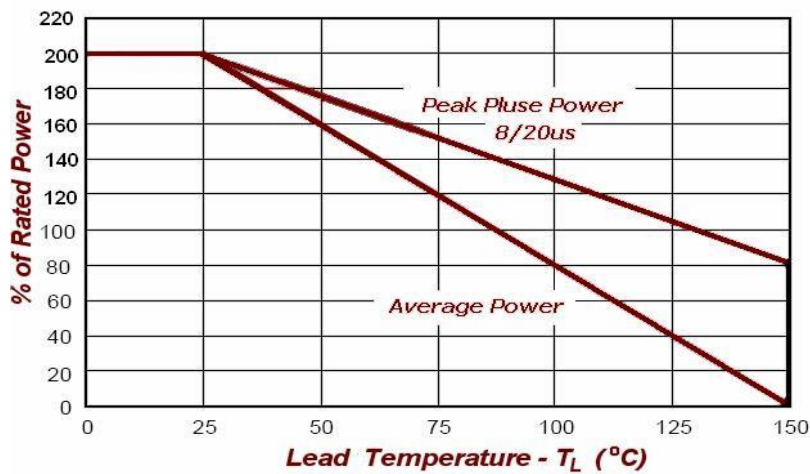
Symbol	Parameter
VRM	Stand-off voltage
VBR	Breakdown voltage
VCL	Clamping voltage
IRM	Leakage current
IPPM	Peak pulse current



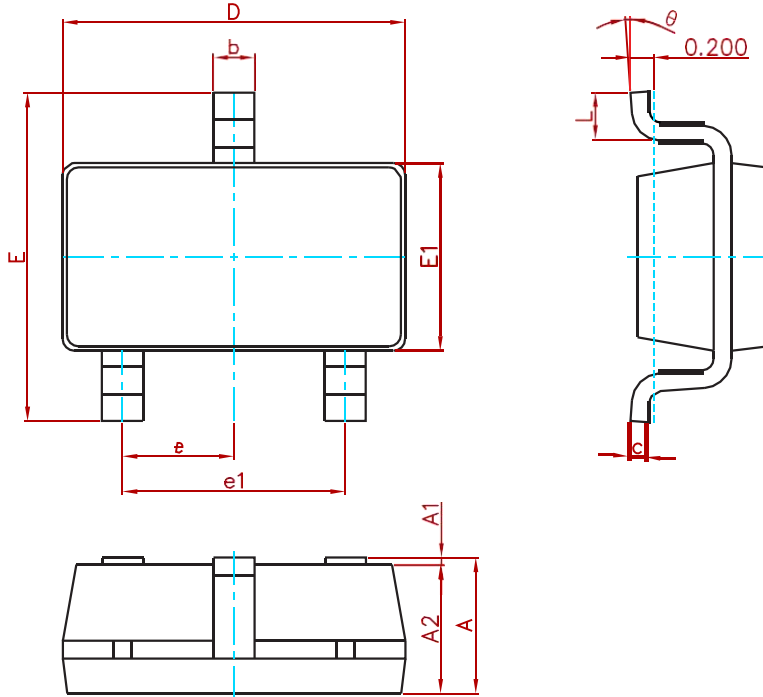
**FIG1: Pulse Waveform**



**FIG2: Power Derating**

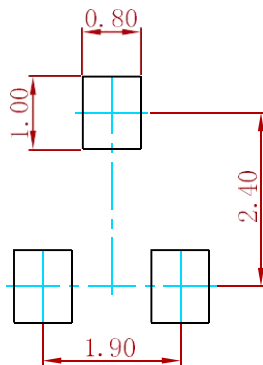


**PACKAGE MECHANICAL DATA**



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
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
SMXXT1G-MS	SOT-23	3000

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