

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## SP0502BAHTG-MS

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### Product specification

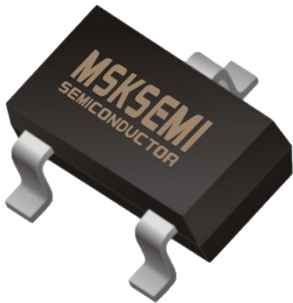
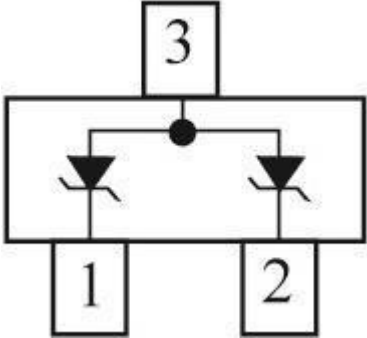

**FEATURES**

- 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:IR max< 20 μA at VRM
- 300W peak pulse power(8/20μs)
- Transient protection for data lines as per IEC61000-4-2(ESD) 15KV(air) 8KV(contact) IEC61000-4-5(Lightning) see IPPM below

**APPLICATIONS**

- Computers
- Printers
- Communication systems

**Reference News**

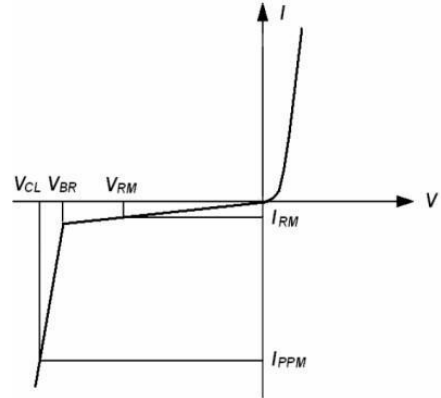
PACKAGE OUTLINE	PIN CONFIGURATION	Marking
 <p>SOT-23</p>		

**ABSOLUTE RATINGS(Ta = 25°C)**

Parameter	Symbol	Limits	Unit
Peak Pulse Power (tp = 8/20μs)	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



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

VRWM (V)	IR (µA) @VRWM	VBR (V) @IT (Note 1)	IT (mA)	VC (V) @IPP=1A	VC (V) @IPP=5A	IPP(A) @tp=8/20µs	C (pF) f=1MHz
Max.	Max.	Min.		Max.	Max.	Max.	Max.
5	5	6	1	9.8	12.5	17	220

1. 8/20 waveform used.

**ELECTRICAL CHARACTERISTICS CURVES**

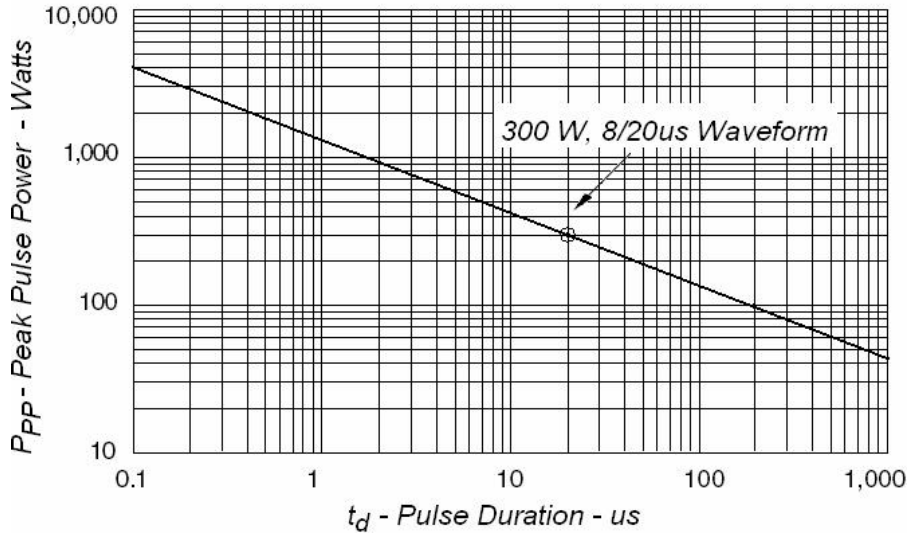


Fig1. Peak Pulse Power VS Pulse Time

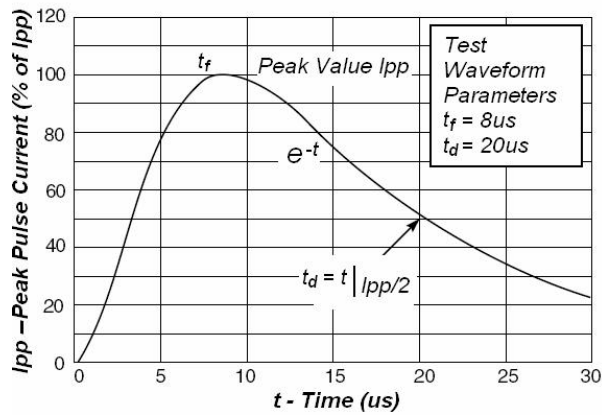


Fig2. Pulse Waveform

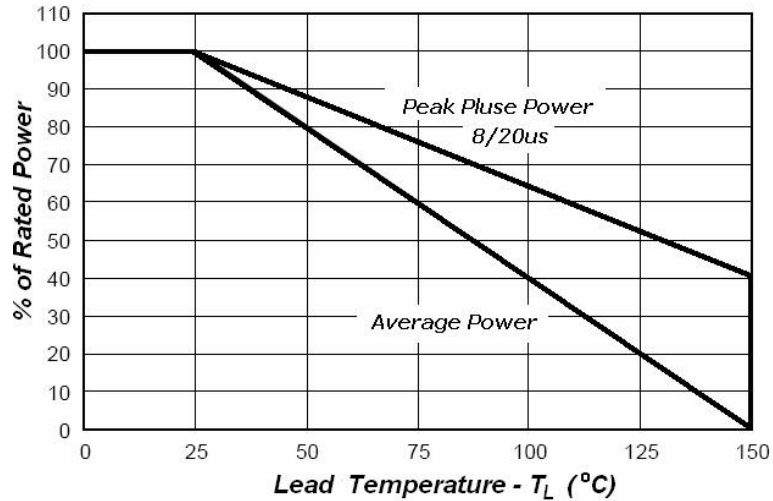
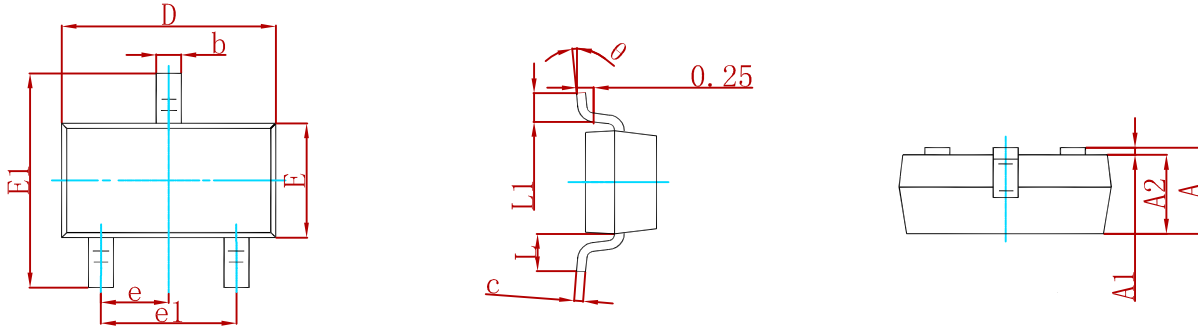


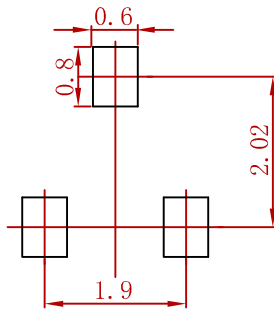
Fig3. Power Derating

**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: ± 0.05mm.  
 3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
SP0502BAHTG-MS	SOT-23	3000

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