

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## SP0504BAHTG-MS

Product specification

## FEATURES

- IEC 61000-4-2 Level 4 ESD Protection
  - $\pm 30\text{kV}$  Contact Discharge
  - $\pm 30\text{kV}$  Air Discharge
- 150W Peak pulse Power (8/20us)
- Low clamping volta

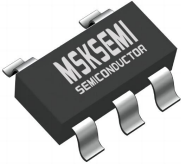
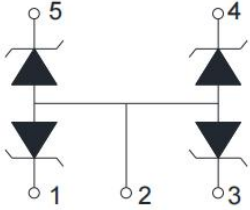
## MACHANICAL DATA

- SOT-23-5L package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature solderin guaranteed:  $260^{\circ}\text{C}/10\text{s}$
- Reel size: 7 inch

## APPLICATIONS

- Computers
- Communication systems
- Wireline and wireless telephone sets
- Printers
- Cellular phones handsets and accessories
- Set top boxes

## Reference News

PACKAGE OUTLINE	PIN CONFIGURATION	Marking
		<div>504B</div>
SOT-23-5L		

## ABSOLUTE MAXIMUM RATING

Over operating free-air temperature range (unless otherwise noted)

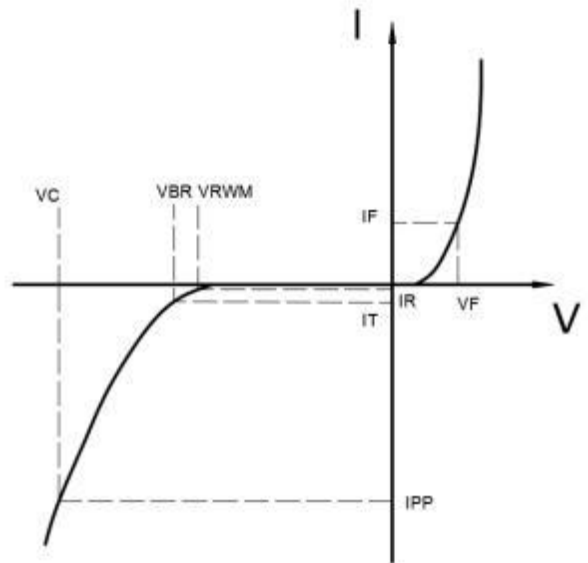
Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25℃	P <sub>pk</sub>	-	150	W
Peak pulse current (tp=8/20us)@25℃	I <sub>PP</sub>		12	A
ESD (IEC61000-4-2 air discharge) @25℃	V <sub>ESD</sub>	-	±30	kV
ESD (IEC61000-4-2 contact discharge) @25℃	V <sub>ESD</sub>	-	±30	kV
Junction temperature	T <sub>J</sub>	-	150	℃
Operating temperature	T <sub>OP</sub>	-40	125	℃
Storage temperature	T <sub>STG</sub>	-55	150	℃
Lead temperature	T <sub>L</sub>	-	260	℃

## ELECTRICAL CHARACTERISTICS (Tamb=25℃)

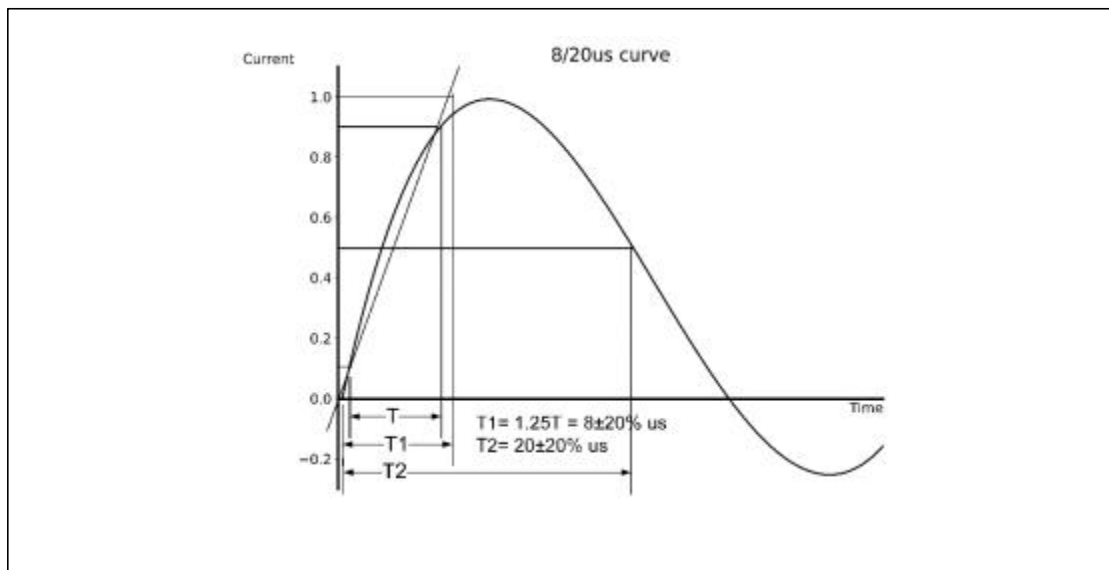
At TA = 25℃ unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	VRWM				5	V
Reverse Breakdown Voltage	VBR	IT=1mA	6			V
Reverse Leakage Current	IR	VRWM=5V			1	uA
Clamping Voltage	VC	IPP=1A; tp=8/20us		7.5		V
Clamping Voltage	VC	IPP=12A; tp=8/20us		11		V
Junction Capacitance	CJ	I/O to GND; VR=0V; f=1MHz	80	100		pF

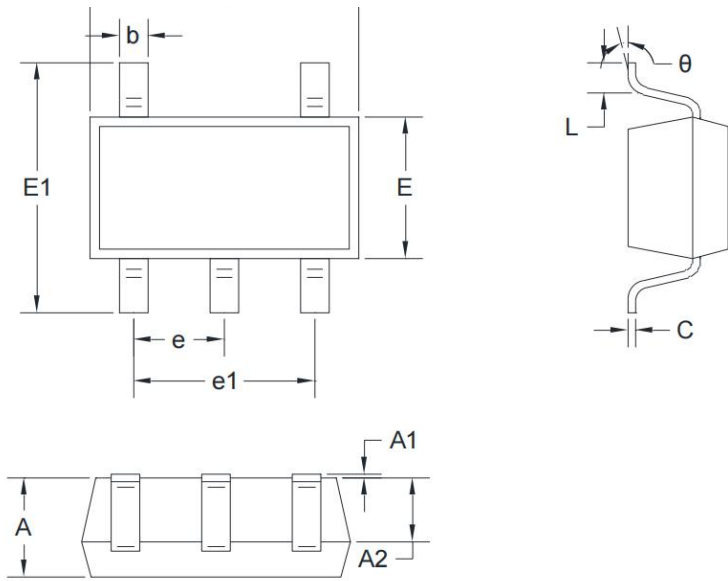
Symbol	Parameters
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



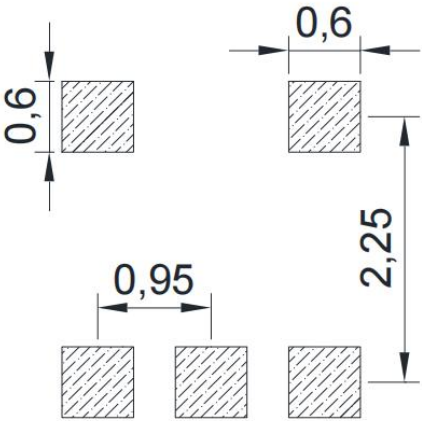
## Typical Characteristic



**PACKAGE MECHANICAL DATA**



Symbol		A	A1	A2	b	c	D
Spec	Min	1.050	0.000	1.050	0.300	0.100	2.820
	Max	1.250	0.100	1.150	0.500	0.200	3.020
Symbol		E	E1	e	e1	L	θ
Spec	Min	1.500	2.650	0.950BSC	1.800	0.300	0°
	Max	1.700	2.950		2.000	0.600	8°



- Note:
1. Controlling dimension: in millimeters
  2. General tolerance:  $\pm 0.05\text{mm}$
  3. The pad layout is for reference only

**REEL SPECIFICATION**

P/N	PKG	QTY
SP0504BAHTG-MS	SOT-23-5L	3000

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