

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

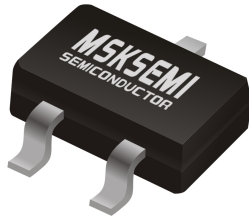
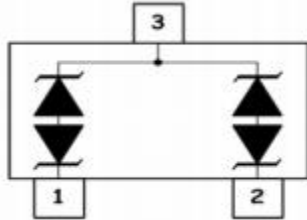


PLED

Product data sheet

[www.msksemi.com](http://www.msksemi.com)

**PIN CONFIGURATION**



SOT-23

**FEATURES**

- ❖ IEC61000-4-2 (ESD)  $\pm 30\text{kV}$  (Contact)  
 $\pm 30\text{kV}$  (Air)
- ❖ IEC61000-4-4 (EFT) 40A (5/50ns)
- ❖ 350 Watts Peak Pulse Power per ( $t_p=8/20\mu\text{s}$ )
- ❖ Protects two bidirectional lines
- ❖ Low clamping voltage
- ❖ Working voltages: 3.3V to 36V
- ❖ Low leakage current

**MACHANICAL DATA**

- ❖ SOT-23 package
- ❖ Flammability Rating: UL 94V-0
- ❖ Packaging: Tape and Reel
- ❖ High temperature soldering guaranteed:  
260C/10s
- ❖ Reel size: 7 inch
- ❖ MSL 1

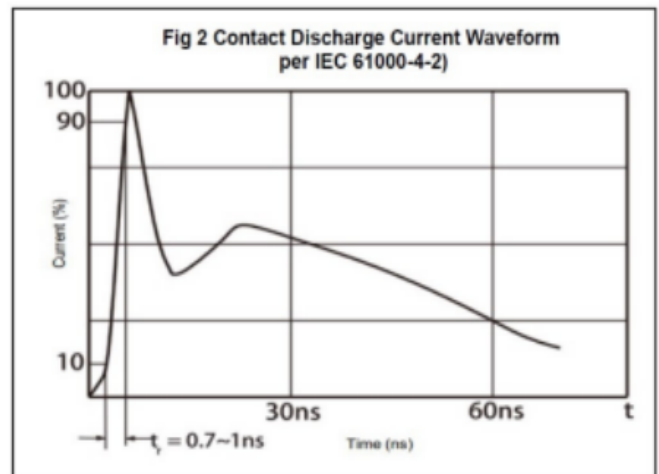
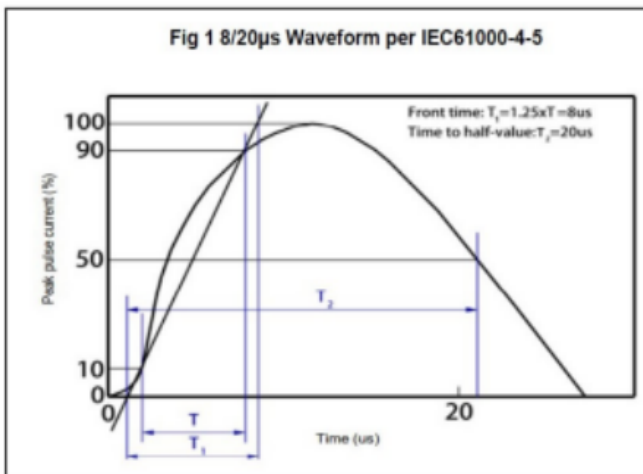
**APPLICATIONS**

- ❖ Cell Phone Handsets and Accessories
- ❖ Microprocessor based equipment
- ❖ Personal Digital Assistants (PDA's)
- ❖ Notebooks, Desktops, and Servers
- ❖ Portable Instrumentation
- ❖ Networking and Telecom
- ❖ Serial and Parallel Ports.
- ❖ Peripherals

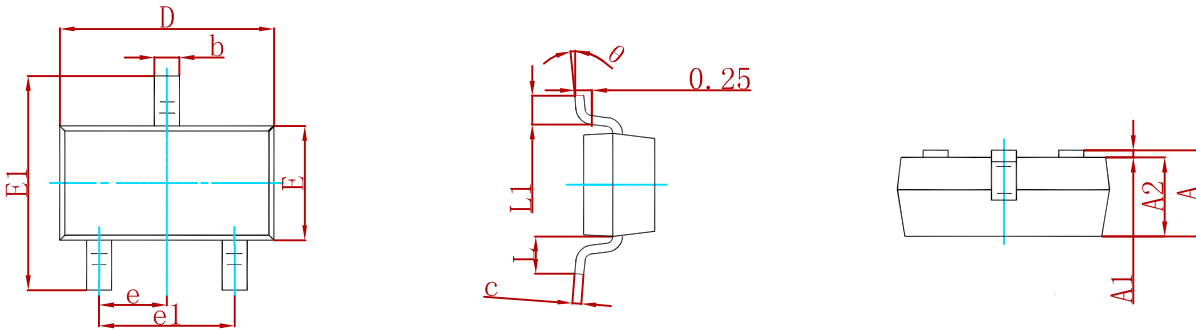
<b>ABSOLUTE MAXIMUM RATING</b>			
Symbol	Parameter	Value	Units
$V_{\text{ESD}}$	ESD per IEC 61000-4-2 (Contact)	$\pm 30$	kV
	ESD per IEC 61000-4-2 (Air)	$\pm 30$	
$P_{\text{PP}}$	Peak Pulse Power (8/20 $\mu\text{s}$ )	350	W
$T_{\text{OPT}}$	Operating Temperature	-55/+150	$^{\circ}\text{C}$
$T_{\text{STG}}$	Storage Temperature	-55/+150	$^{\circ}\text{C}$
$T_{\text{L}}$	Lead Soldering Temperature	260 (10 sec.)	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (Tamb=25 <sup>0</sup> C)									
P/N	MARK	V <sub>RWM</sub> (V) (max.)	V <sub>B</sub> (V) (min.)	I <sub>T</sub> (mA)	V <sub>C@1A</sub> (V) (max.)	V <sub>C</sub> (V) (max.) (@A)		I <sub>R</sub> (μA) (max.)	C <sub>J</sub> (pF) (max.)
SM03C-MS	C03	3.3	4.0	1	7.5	16.0	20	40	450
SM05C-MS	C05	5.0	6.0	1	9.8	18.0	17	10	200
SM08C-MS	C08	8.0	8.5	1	13.4	24.0	15	2	120
SM12C-MS	C12	12.0	13.3	1	19.0	32.0	11	1	75
SM15C-MS	C15	15.0	16.7	1	24.0	38.0	10	1	68
SM18C-MS	C18	18.0	20.0	1	29.0	45.0	9	1	57
SM20C-MS	C20	20.0	22.3	1	35.0	50.0	8	1	52
SM24C-MS	C24	24.0	26.7	1	43.0	52.0	7	1	50
SM36C-MS	C36	36.0	40.0	1	60.0	75.0	4.5	1	35

**ELECTRICAL CHARACTERISTICS CURVE**

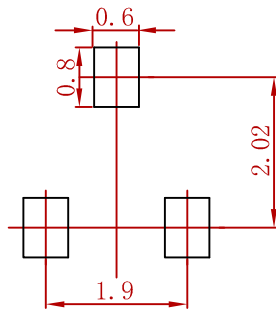


**PACKAGE MECHANICAL DATA**



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
SMXXC-MS	SOT-23	3000

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