

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

**POSTXXC**

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**Product specification**

## 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 (tp=8/20 $\mu\text{s}$ )  
Protects one bidirectional line or two unidirectional lines
- unidirectional lines
- Low clamping voltage
- Working voltages: 3.3V to 36V
- Low leakage current

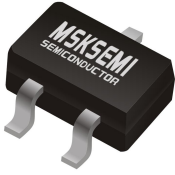
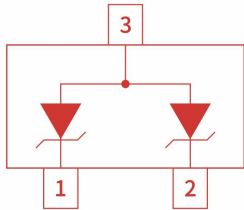
## MACHANICAL DATA

- 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

## Reference News

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

## Marking for the SMXX series

| VRWM    | 3.3V | 5V  | 8V  | 12V | 15V | 18V | 20V | 24V | 36V |
|---------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| Marking | M03  | M05 | M08 | M12 | M15 | M18 | M20 | M24 | M36 |

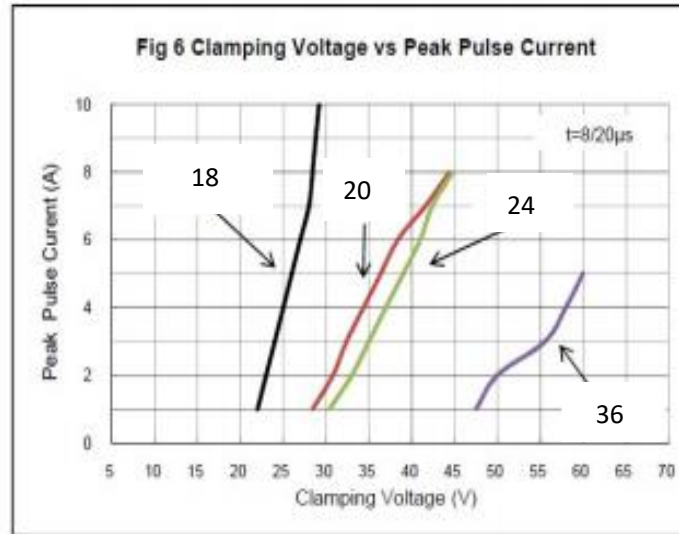
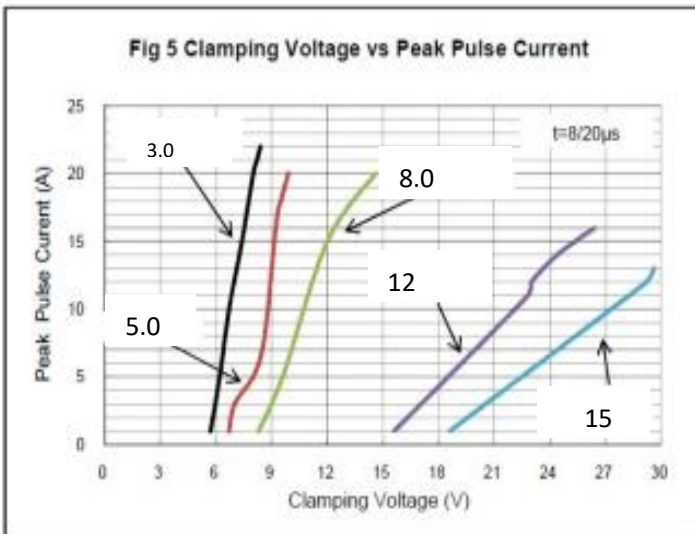
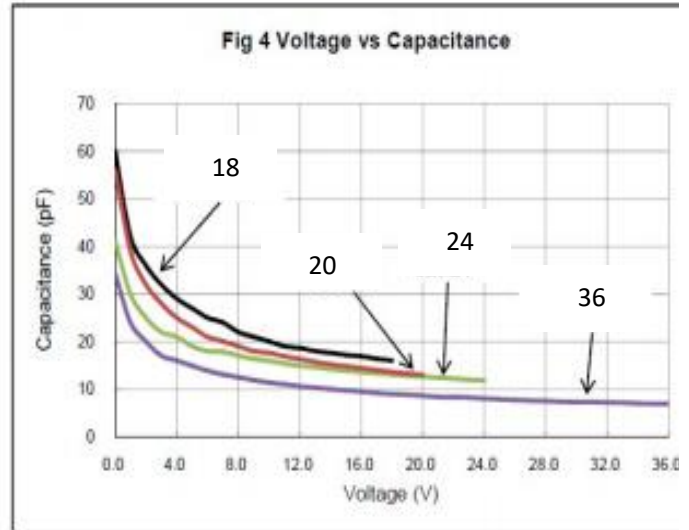
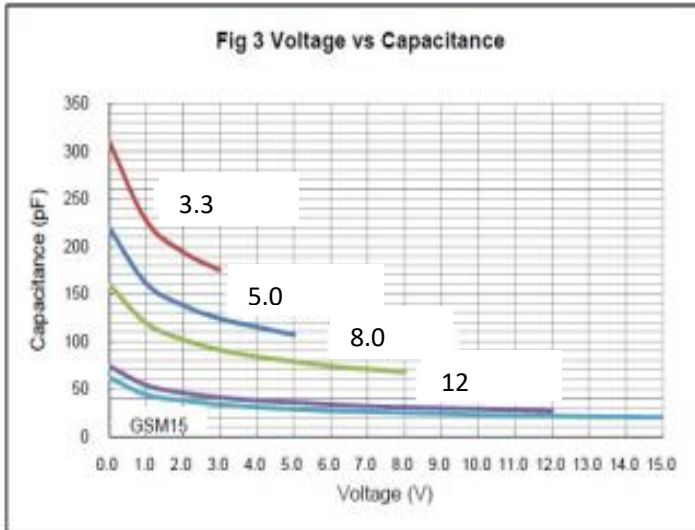
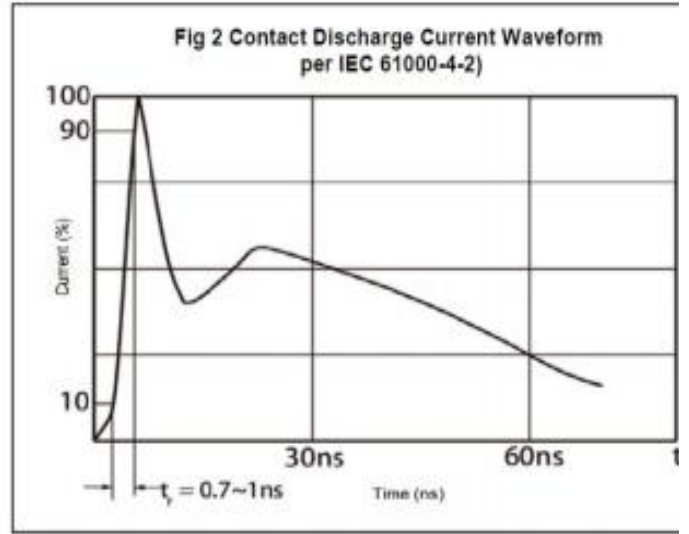
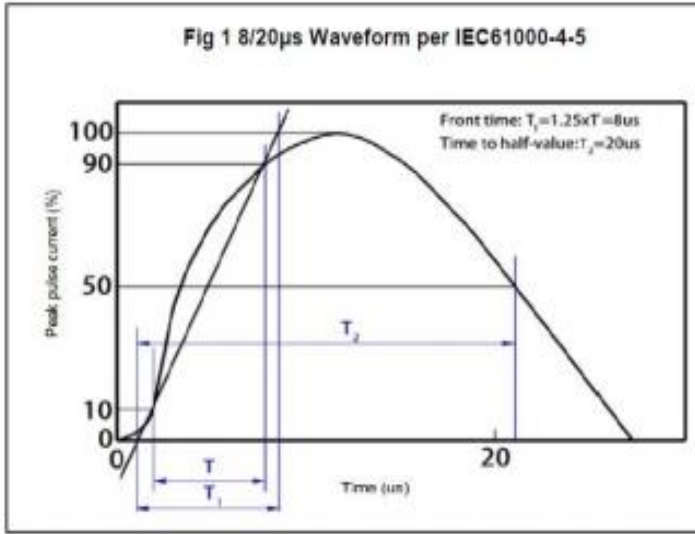
## ABSOLUTE MAXIMUM RATING

| Symbol | Parameter                       | Value       | Units |
|--------|---------------------------------|-------------|-------|
| VESD   | ESD per IEC 61000-4-2 (Contact) | ±30         | kV    |
|        | ESD per IEC 61000-4-2 (Air)     | ±30         |       |
| PPP    | Peak Pulse Power (8/20µs)       | 350         | W     |
| TOPT   | Operating Temperature           | -55~125     | °C    |
| TSTG   | Storage Temperature             | -55~150     | °C    |
| TL     | Lead Soldering Temperature      | 260(10 sec) | °C    |

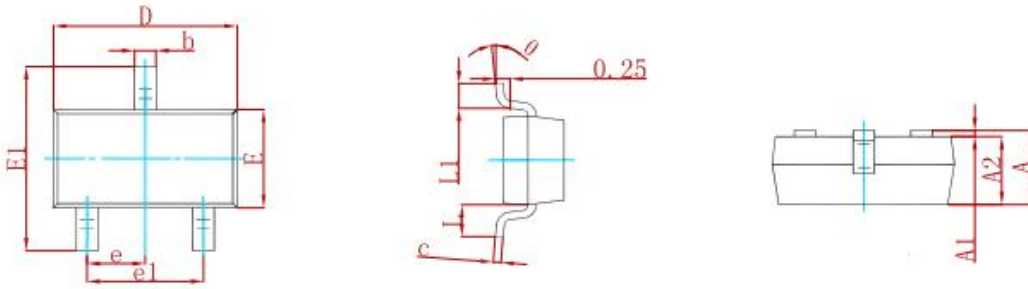
## ELECTRICAL CHARACTERISTICS (Tamb=25 °C)

| PART NUMBER | V RWM (V) (max.) | V B (V) (min.) | IT (mA) | VC @1 A (V) (max.) | VC (V) |      | IR (µA) (max.) | CT (pF) (max.) |
|-------------|------------------|----------------|---------|--------------------|--------|------|----------------|----------------|
|             |                  |                |         |                    | (max.) | (@A) |                |                |
| PSOT03C     | 3.3              | 4              | 1       | 7.0                | 14     | 20   | 40             | 450            |
| PSOT05C     | 5                | 6              | 1       | 9.8                | 18     | 17   | 10             | 300            |
| PSOT08C     | 8                | 8.5            | 1       | 13.4               | 24     | 15   | 2              | 240            |
| PSOT12C     | 12               | 13.3           | 1       | 19                 | 32     | 11   | 1              | 130            |
| PSOT15C     | 15               | 16.7           | 1       | 24                 | 38     | 10   | 1              | 120            |
| PSOT18C     | 18               | 20             | 1       | 29                 | 45     | 9    | 1              | 100            |
| PSOT20C     | 20               | 22.3           | 1       | 35                 | 50     | 8    | 1              | 90             |
| PSOT24C     | 24               | 26.7           | 1       | 43                 | 52     | 7    | 1              | 80             |
| PSOT36C     | 36               | 40             | 1       | 60                 | 75     | 5    | 1              | 60             |

**ELECTRICAL CHARACTERISTICS CURVE**

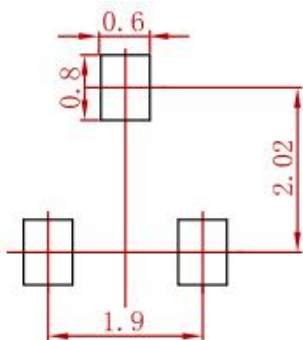


**PACKAGE MECHANICAL DATA**



| 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  |
|---------|--------|------|
| PSOTXXC | SOT-23 | 3000 |

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