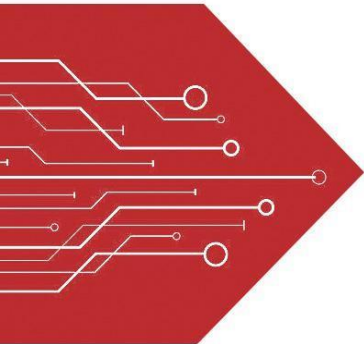


# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

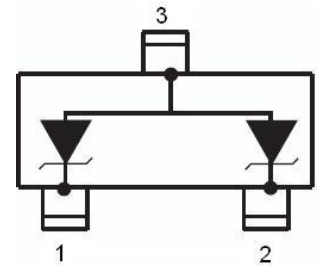
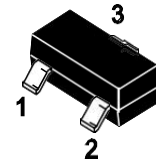


PLED

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:  $I_R \text{ max} < 20 \mu\text{A}$  at VRM
- 300W peak pulse power(8/20 $\mu\text{s}$ )
- 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

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

| Part Numbers | $V_{BR}$ |      |      | $I_T$ | $V_{RWM}$ | $I_R$ | $C$          |
|--------------|----------|------|------|-------|-----------|-------|--------------|
|              | Min.     | Typ. | Max. |       |           |       | Typ. 0v bias |
|              | V        | V    | V    |       |           |       | pF           |
| GSOT05C-MS   | 6.0      | 6.7  | 7.4  | 1     | 5.0       | 1     | 30           |
| GSOT12C-MS   | 13.3     | 14.0 | 14.7 | 1     | 12.0      | 1     | 25           |
| GSOT15C-MS   | 16.7     | 17.4 | 18.1 | 1     | 15.0      | 1     | 25           |
| GSOT24C-MS   | 26.7     | 28.2 | 29.6 | 1     | 24.0      | 1     | 20           |

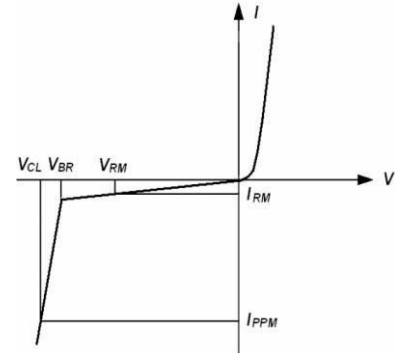
1).8/20 waveform used. (see fig2.)

**ABSOLUTE RATINGS(Ta = 25°C)**

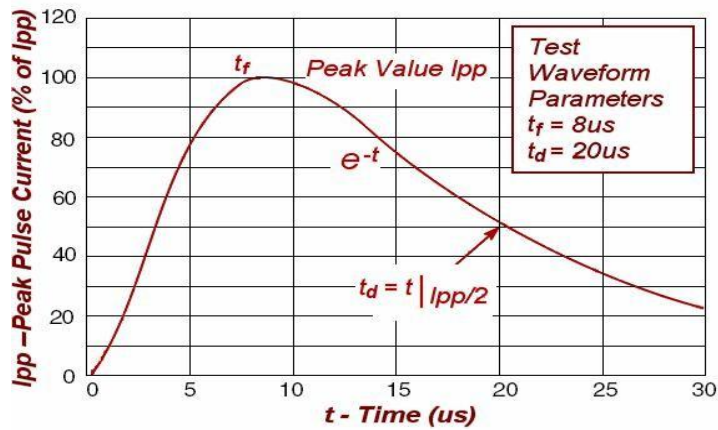
| Parameter  | Symbol | Limits     | Unit |
|--|--------|------------|------|
| Peak Pulse Power (tp = 8/20 $\mu\text{s}$ )            | PPP    | 300        | W    |
| Lead Solder Temperature - Maximum (10 Second Duration) | TL     | 260        | °C   |
| Storage Temperature Range                              | 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)**

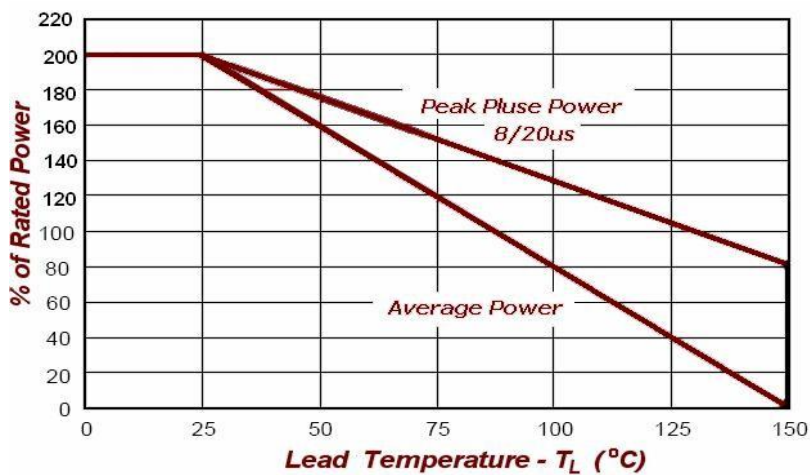
| Symbol | Parameter          |
|--------|--------------------|
| VRM    | Stand-off voltage  |
| VBR    | Breakdown voltage  |
| VCL    | Clamping voltage   |
| IRM    | Leakage current    |
| IPPM   | Peak pulse current |



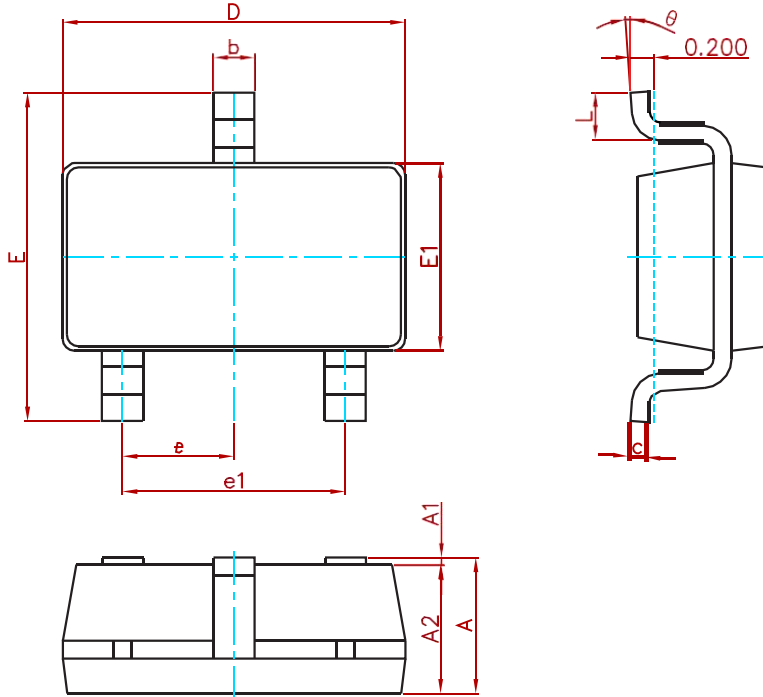
**FIG1: Pulse Waveform**



**FIG2: Power Derating**

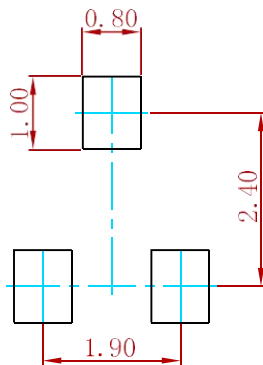


**PACKAGE MECHANICAL DATA**



| 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 |
| theta  | 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  |
|------------|--------|------|
| GSOTXXC-MS | SOT-23 | 3000 |

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