

## Applications

- ◆ Protection of RS-485 transceivers
- ◆ Security systems
- ◆ Automatic Teller Machines
- ◆ HFC systems
- ◆ Networks

## IEC COMPATIBILITY

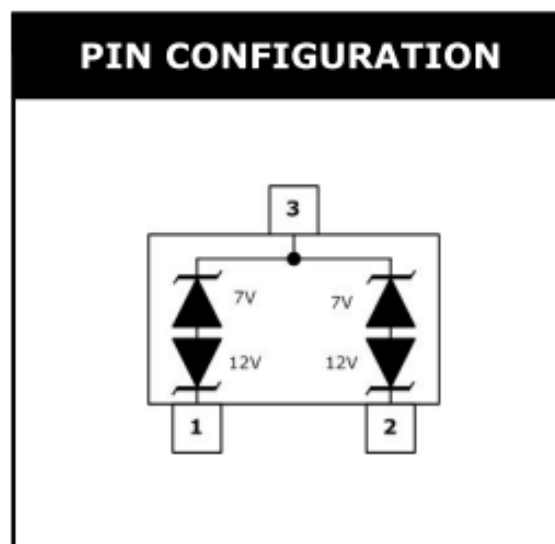
- ◆ IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50  $\mu\text{s}$ )
- ◆ IEC61000-4-5 (Lightning) 12A (8/20 $\mu\text{s}$ )

## Features

- ◆ 400 Watts Peak Pulse Power per Line ( $t_p=8/20\mu\text{s}$ )
- ◆ Protects two +12V to -7V lines
- ◆ Low clamping voltage
- ◆ RoHS Compliant

## Mechanical Characteristics

- ◆ JEDEC SOT-23 Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 8.0 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free



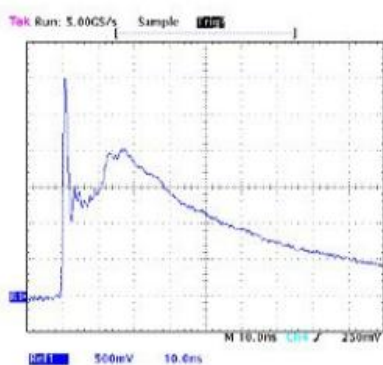
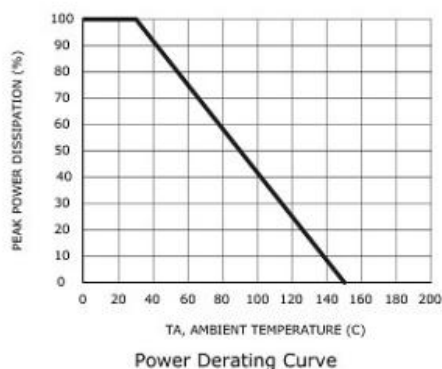
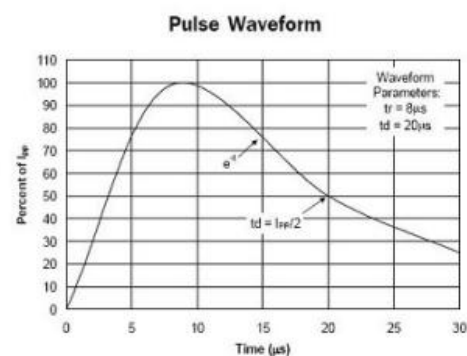
### Device Characteristics

#### MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)

| PARAMETER                             | SYMBOL           | VALUE         | UNITS |
|---------------------------------------|------------------|---------------|-------|
| Peak Pulse Power (tp=8/20μs waveform) | P <sub>PP</sub>  | 400           | Watts |
| Lead Soldering Temperature            | T <sub>L</sub>   | 260 (10 sec.) | °C    |
| Operating Temperature Range           | T <sub>J</sub>   | -55 ~ 150     | °C    |
| Storage Temperature Range             | T <sub>STG</sub> | -55 ~ 150     | °C    |

#### ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)

| PART NUMBER | DEVICE MARKING |                                 | V <sub>RWM</sub><br>(V)<br>(max.) | V <sub>B</sub><br>(V)<br>(min.) | I <sub>T</sub><br>(mA) | V <sub>C</sub><br>@5A<br>(max.) | V <sub>C</sub><br>(max.)<br>(@A) |    | I <sub>R</sub><br>(μA)<br>(max.) | C <sub>T</sub><br>(pF)<br>(typ.) |
|-------------|----------------|---------------------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------|----------------------------------|----|----------------------------------|----------------------------------|
| ECSM712T23  | M72            | Pin 3<br>to<br>Pin 1 /<br>Pin2  | 7                                 | 7.5                             | 1                      | 10                              | 12                               | 17 | 10                               | 55                               |
|             |                | Pin 1 /<br>Pin 2<br>to<br>Pin 3 | 12                                | 13.3                            | 1                      | 20                              | 25                               | 17 | 1                                | 55                               |



### SOT23 Package Outline & Dimensions

| DIM | MILLIMETERS |      |      | INCHES |       |       |
|-----|-------------|------|------|--------|-------|-------|
|     | MIN         | NOM  | MAX  | MIN    | NOM   | MAX   |
| A   | 0.89        | 1.00 | 1.11 | 0.035  | 0.040 | 0.044 |
| A1  | 0.01        | 0.06 | 0.10 | 0.001  | 0.002 | 0.004 |
| b   | 0.37        | 0.44 | 0.50 | 0.015  | 0.018 | 0.020 |
| c   | 0.09        | 0.13 | 0.18 | 0.003  | 0.005 | 0.007 |
| D   | 2.80        | 2.90 | 3.04 | 0.110  | 0.114 | 0.120 |
| E   | 1.20        | 1.30 | 1.40 | 0.047  | 0.051 | 0.055 |
| e   | 1.78        | 1.90 | 2.04 | 0.070  | 0.075 | 0.081 |
| L   | 0.35        | 0.54 | 0.69 | 0.014  | 0.021 | 0.029 |
| HE  | 2.10        | 2.40 | 2.64 | 0.083  | 0.094 | 0.104 |

#### \* SOLDERING FOOTPRINT

