

## 1.Description

The LGSOT05CLT1G is a dual monolithic voltage suppressor designed to protect components which are connected to data and transmission lines against ESD. It clamps the voltage just above the logic level supply for positive transients, and to a diode drop below ground for negative transients. It can also work as bidirectional suppressor by connecting only pin1 and 2.

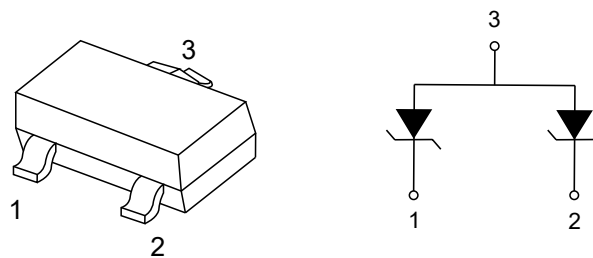
## 2.Features

- 2 Unidirectional Transil functions
- Low leakage current:  $I_R \max < 20 \mu A$  at  $V_{RM}$
- 300W peak pulse power(8/20 $\mu s$ )
- Transient protection for data lines as per IEC61000-4-2(ESD) 15kV(air) 8kV(contact)  
IEC61000-4-5(Lightning) see  $I_{PPM}$  below
- We declare that the material of product compliant with RoHS requirements and Halogen Free.

## 3.Applications

- Computers、Printers
- Communication systems

## 4.Pinning information



**SOT-23**



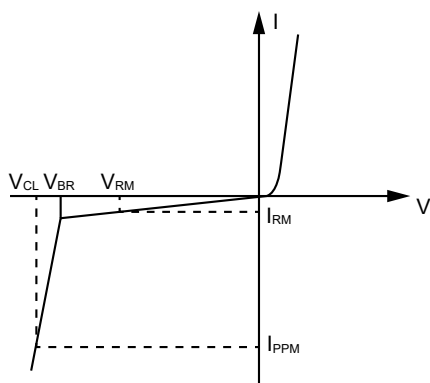
## 5. Absolute Maximum Ratings $T_A = 25^\circ\text{C}$

| Parameter                                  | Symbol    | Value      | Units            |
|--------------------------------------------|-----------|------------|------------------|
| IEC 61000-4-2 (ESD)                        | Contact   | $\pm 8$    | kV               |
|                                            | Air       | $\pm 15$   | kV               |
| Peak Pulse Power ( $t_p=8/20\mu\text{s}$ ) | $P_{PP}$  | 300        | W                |
|                                            | $T_J$     | 150        | $^\circ\text{C}$ |
| Storage temperature                        | $T_{STG}$ | -55 to 150 | $^\circ\text{C}$ |
| Junction Temperature Range                 | $T_{OP}$  | -40 to 125 | $^\circ\text{C}$ |
| (10 Second Duration)                       | $T_L$     | 260        | $^\circ\text{C}$ |

Notes:

(1) For a surge greater than the maximum values, the diode will fail in short-circuit.

## 6. Electrical Parameters ( $T_A=25^\circ\text{C}$ unless otherwise noted )



| Symbol    | Parameter          |
|-----------|--------------------|
| $V_{RM}$  | Stand-off voltage  |
| $V_{BR}$  | Breakdown voltage  |
| $V_{CL}$  | Clamping voltage   |
| $I_{RM}$  | Leakage current    |
| $I_{PPM}$ | Peak pulse current |



7.Electrical Characteristic (T<sub>amb</sub>=25°C)

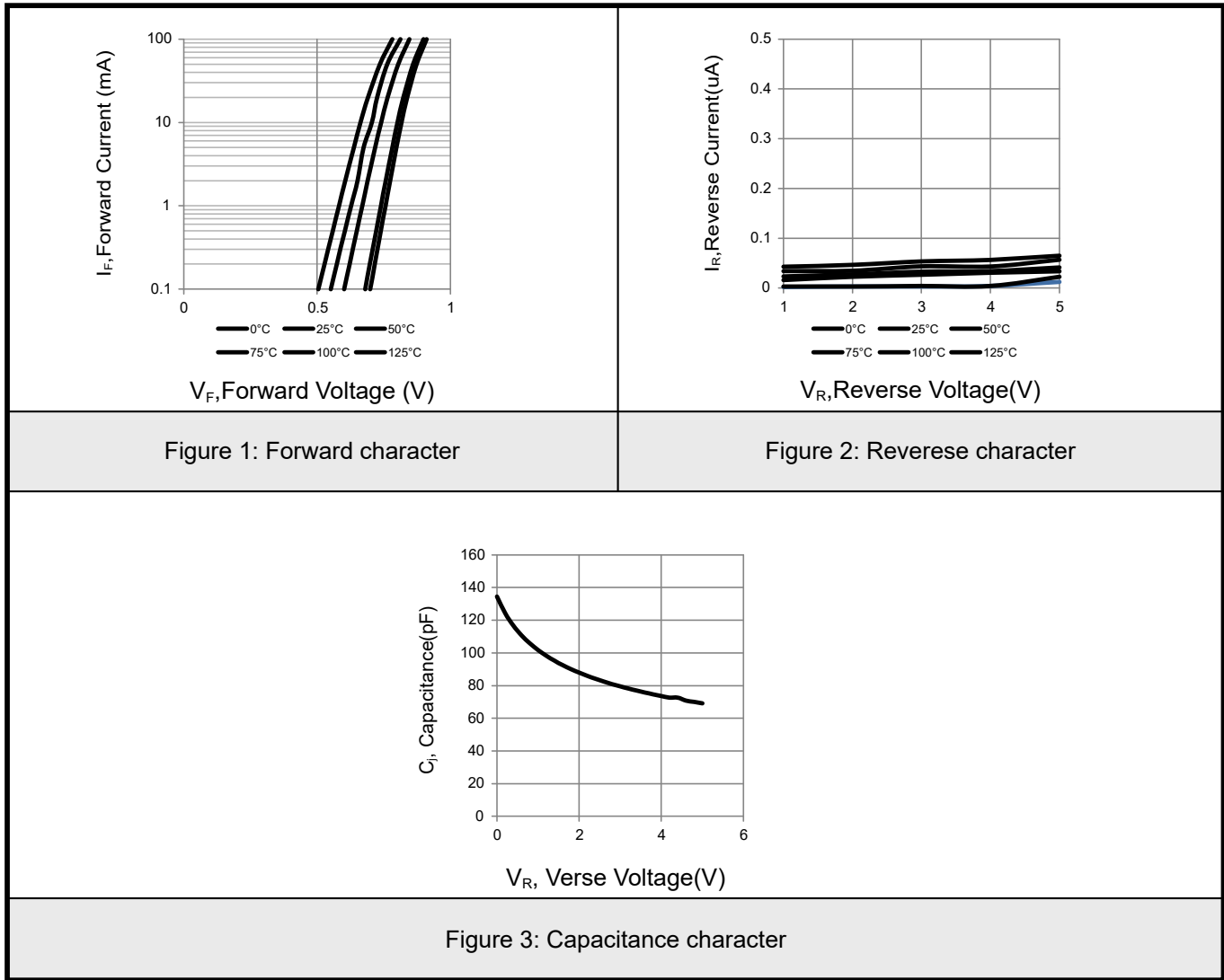
| Device       | V <sub>RWM</sub> (V) | I <sub>R</sub> (uA)<br>@V <sub>RWM</sub> | V <sub>BR</sub> (V)@I <sub>T</sub><br>(Note 1) | I <sub>T</sub> | V <sub>C</sub> (V)<br>@I <sub>PP</sub> =1A | V <sub>C</sub> (V)<br>@I <sub>PP</sub> =5A | I <sub>PP</sub> (A)<br>@t <sub>p</sub> =8/20μs | C(pF) |
|--------------|----------------------|------------------------------------------|------------------------------------------------|----------------|--------------------------------------------|--------------------------------------------|------------------------------------------------|-------|
|              | Max                  | Max                                      | Min                                            | mA             | Max                                        | Max                                        | Max                                            | Max   |
| LGSOT05CLT1G | 5                    | 5                                        | 6                                              | 1              | 9.8                                        | 12.5                                       | 17                                             | 220   |

Notes:

1. V<sub>BR</sub> is measured with a pluse test current I<sub>T</sub> at an ambient temperature of 25°C.

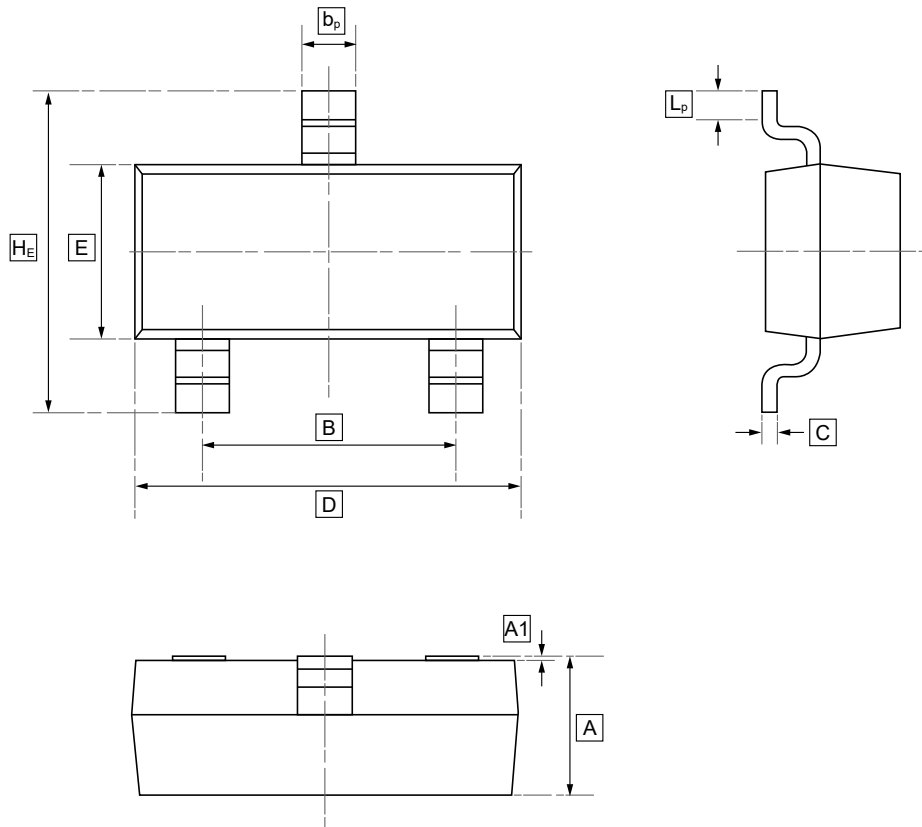


8. Typical characteristic





## 9.SOT-23 Package Outline Dimensions

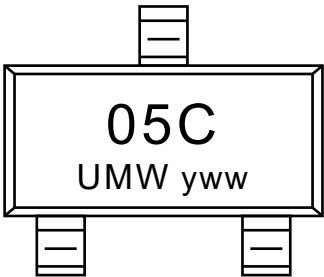


**DIMENSIONS (mm are the original dimensions)**

| Symbol | A    | B    | $b_p$ | C    | D    | E    | $H_E$ | A1    | $L_p$ |
|--------|------|------|-------|------|------|------|-------|-------|-------|
| Min    | 0.95 | 1.78 | 0.35  | 0.08 | 2.70 | 1.20 | 2.20  | 0.013 | 0.20  |
| Max    | 1.40 | 2.04 | 0.50  | 0.19 | 3.10 | 1.65 | 3.00  | 0.100 | 0.50  |



10.Ordering information



yww: Batch Code

| Order Code       | Package | Base QTY | Delivery Mode |
|------------------|---------|----------|---------------|
| UMW LGSOT05CLT1G | SOT-23  | 3000     | Tape and reel |



## **11.Disclaimer**

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