

## 1.Features

- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
  - Air discharge:  $\pm 30\text{kV}$
  - Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 7A (8/20 $\mu\text{s}$ )
- 150W peak pulse power(8/20 $\mu\text{s}$ )
- Ultra low leakage: nA level
- Operating voltage: 7V or 12V
- Low clamping voltage
- RoHS Compliant

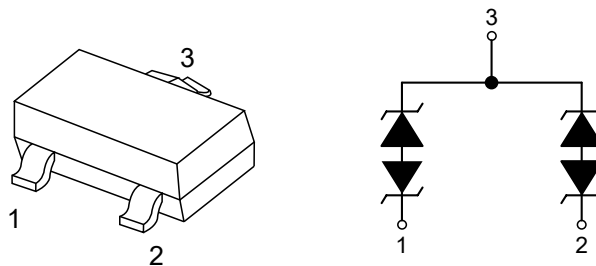
## 2.Applications

- Wireless System
- Networks
- Portable Instrumentation
- RS485 Ports

## 3.Mechanical Characteristics

- Package: SOT-23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

## 4.Pinning information



**SOT-23**



## 5. Absolute Maximum Ratings

| Parameter                      | Symbol    | Value      | Units |
|--------------------------------|-----------|------------|-------|
| Peak Pulse Power (8/20μs)      | $P_{PK}$  | 150        | W     |
| Peak Pulse Current (8/20μs)    | $I_{PP}$  | 7          | A     |
| ESD per IEC 61000-4-2(Air)     | $V_{ESD}$ | ±30        | kV    |
| ESD per IEC 61000-4-2(Contact) |           | ±30        | kV    |
| Junction Temperature Range     | $T_J$     | -55 to 125 | °C    |
| Storage Temperature Range      | $T_{STG}$ | -55 to 150 | °C    |

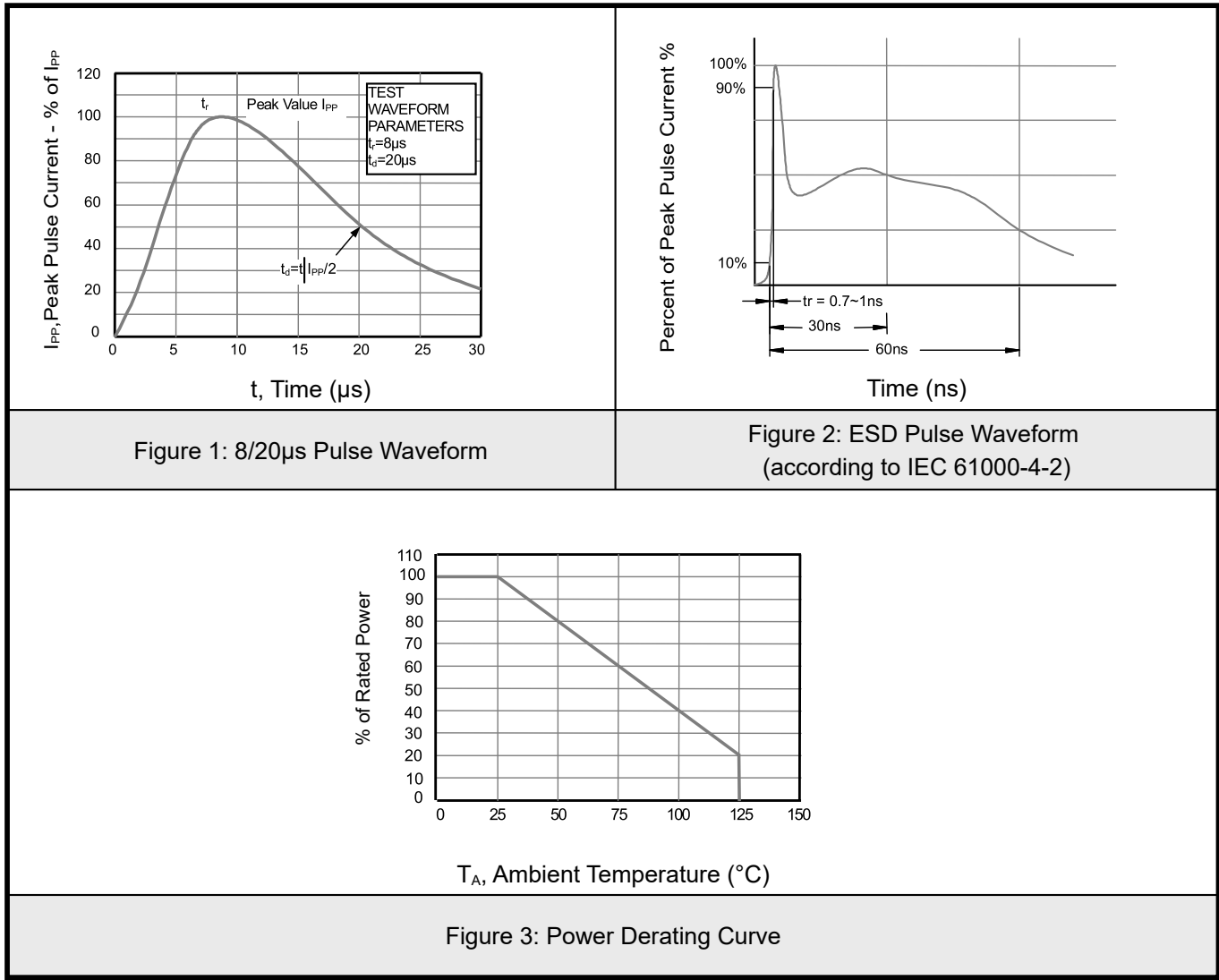


## 6. Electrical Characteristics

| Parameter               | Symbol    | Conditions                                  | Pin 1 to 3 and 2 to 3<br>(12V TVS) |      |     | Pin 3 to 1 and 3 to 2<br>(7V TVS) |      |     | Units   |
|-------------------------|-----------|---------------------------------------------|------------------------------------|------|-----|-----------------------------------|------|-----|---------|
|                         |           |                                             | Min                                | Typ  | Max | Min                               | Typ  | Max |         |
| Reverse Working Voltage | $V_{RWM}$ |                                             |                                    |      | 12  |                                   |      | 7   | V       |
| Breakdown Voltage       | $V_{BR}$  | $I_T=1mA$                                   | 13.3                               |      |     | 7.5                               |      |     | V       |
| Reverse Leakage Current | $I_R$     | $V_R=V_{RWM}$                               |                                    | 0.01 | 0.5 |                                   | 0.01 | 0.5 | $\mu A$ |
| Clamping Voltage        | $V_C$     | $I_{PP}=1A(8 \times 20\mu s \text{ pulse})$ |                                    |      | 19  |                                   |      | 11  | V       |
|                         |           | $I_{PP}=7A(8 \times 20\mu s \text{ pulse})$ |                                    |      | 25  |                                   |      | 15  | V       |
| Junction Capacitance    | $C_J$     | $V_R=0V, f=1MHz$                            |                                    |      | 75  |                                   |      | 75  | pF      |
|                         |           | $V_R=V_{RWM}, f=1MHz$                       |                                    | 45   |     |                                   | 45   |     | pF      |

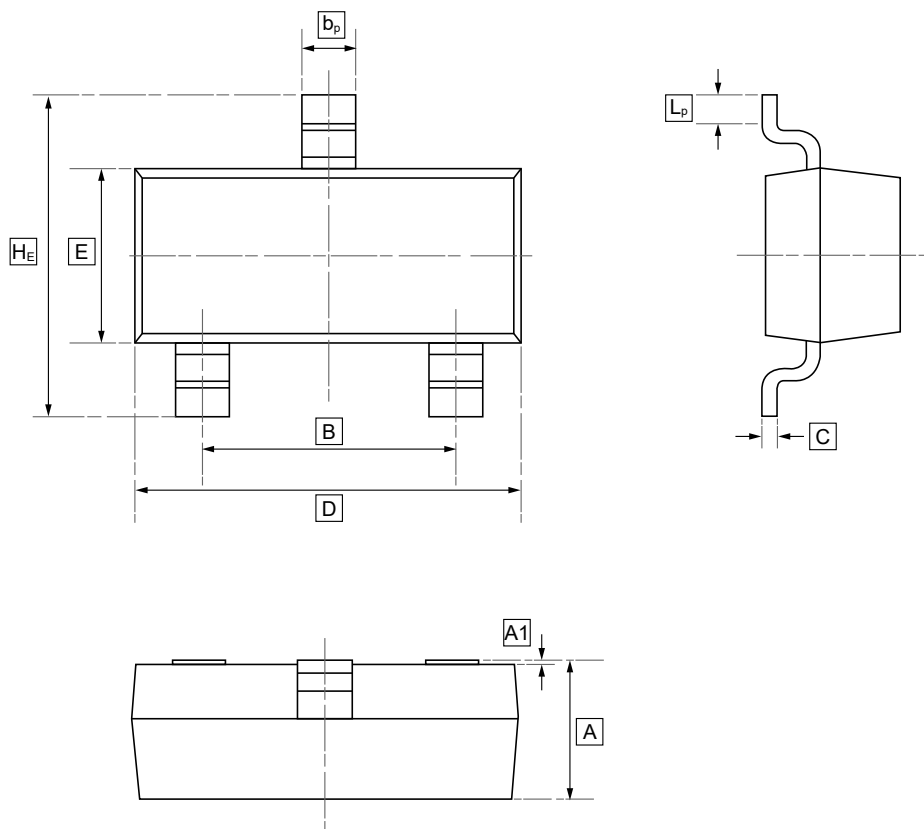


7. Typical characteristic





## 8.SOT-23 Package Outline Dimensions

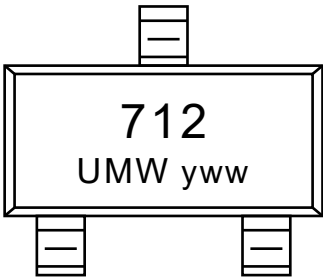


**DIMENSIONS (mm are the original dimensions)**

| 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  |



9.Ordering information



yww: Batch Code

| Order Code       | Package | Base QTY | Delivery Mode |
|------------------|---------|----------|---------------|
| UMW PSM712-LF-T7 | SOT-23  | 3000     | Tape and reel |



## **10.Disclaimer**

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