

## 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) 6A (8/20 $\mu\text{s}$ )
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- RoHS Compliant

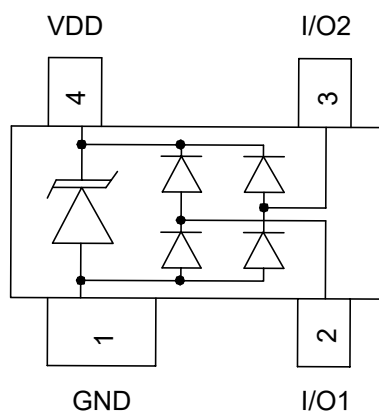
## 2.Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

## 3.Mechanical Data

- Package: SOT-143
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0

## 4.Pinning Information



**SOT-143**



## 5. Absolute Maximum Ratings

Parameter	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PK}$	500	W
Peak Pulse Current ( $t_p=8/20\mu s$ )	$I_{PP}$	25	A
Peak Forward Voltage ( $I_F=1A$ , $t_p=8/20\mu s$ )	$V_{FP}$	1.5	V
Lead Soldering Temperature	$T_L$	260/10s	°C
Operating Temperature	$T_J$	-55 to 125	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C

## 6. Electrical Characteristics ( $T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	6			V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V$ , $T=25^\circ C$			5	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=1A$ , $t_p=8/20\mu s$			9.8	V
		$I_{PP}=10A$ , $t_p=8/20\mu s$			12	V
		$I_{PP}=25A$ , $t_p=8/20\mu s$			20	V
Junction Capacitance	$C_J$	Between I/O pins and Ground $V_R=0V$ , $f=1MHz$		6	10	pF
		Between I/O pins $V_R=0V$ , $f=1MHz$		3		pF



## 7. Typical Characteristic

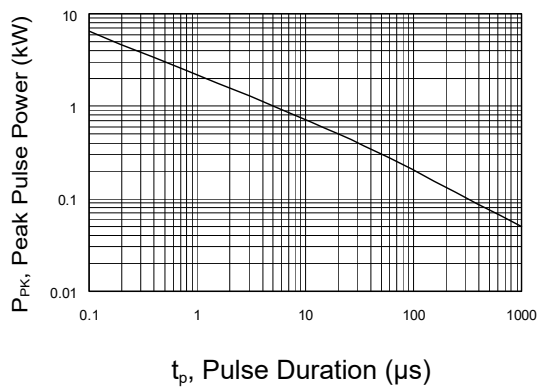


Figure 1: Non-Repetitive Peak Pulse Power vs. Pulse Time

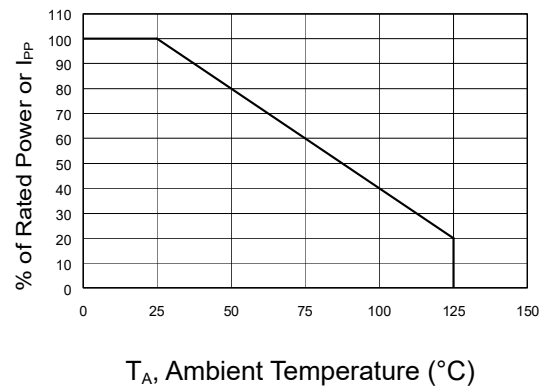


Figure 2: Power Derating Curve

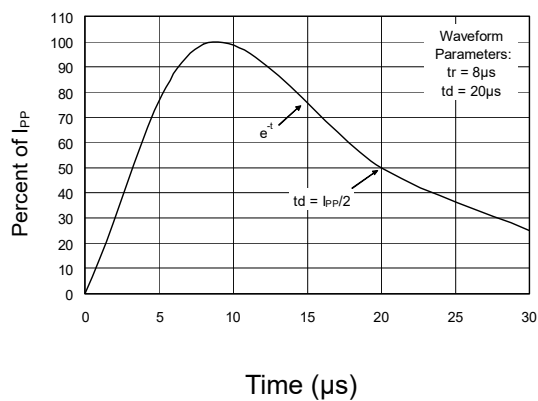


Figure 3: Pulse Waveform

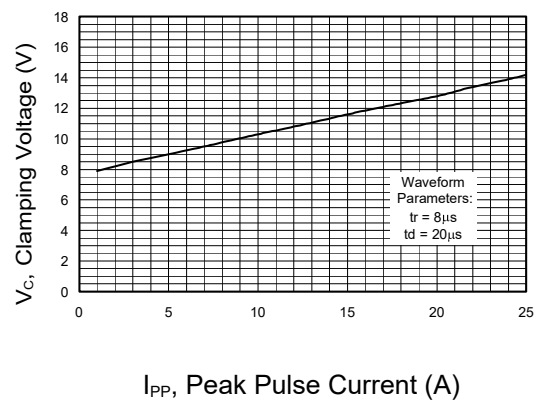


Figure 4: Clamping Voltage vs. Peak Pulse Current

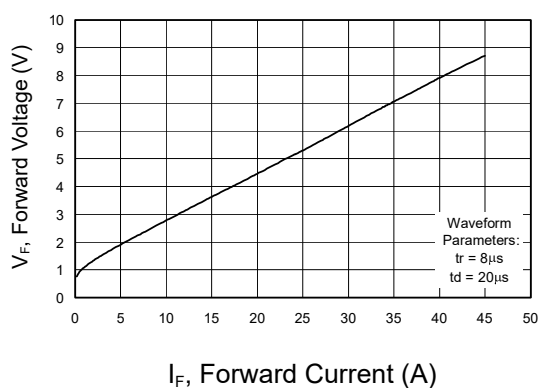


Figure 5: Forward Voltage vs. Forward Current

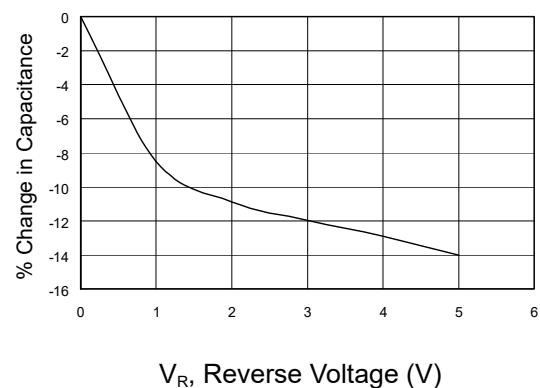
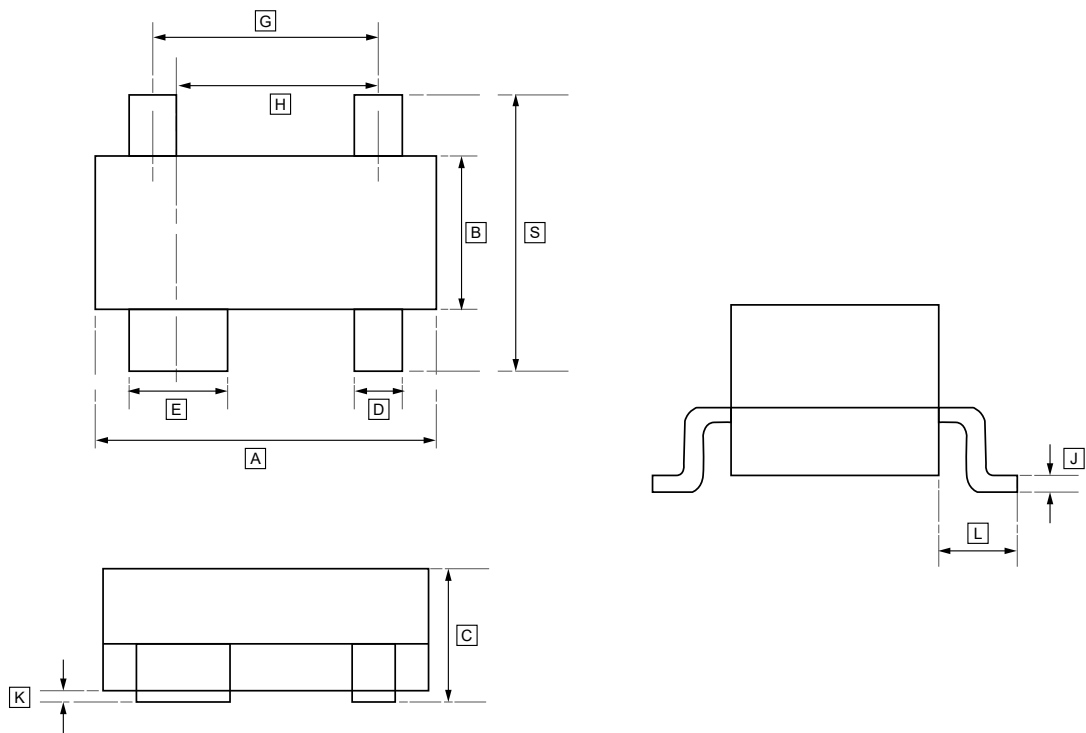


Figure 6: Capacitance vs. Reverse Voltage



8.SOT-143 Package Outline Dimensions

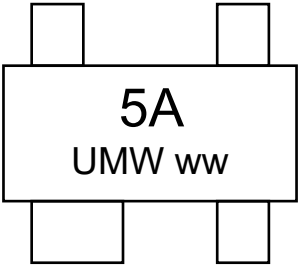


DIMENSIONS (mm are the original dimensions)

Symbol	A	B	C	D	E	G	H	J	K	L	S
Min	2.80	1.20	0.80	0.37	0.76	1.92	1.72	0.085	0.013	0.254	2.10
Max	3.04	1.40	1.20	0.510	0.940	BSC	BSC	0.180	0.10	0.55	2.64



## 9.Ordering Information



ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW PSR05-LF-T7	SOT-143	3000	Tape and reel



## **10.Disclaimer**

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