

### Features

- 100 Watts Peak Pulse Power per Line ( $t_p = 8/20\mu s$ )
- Protects one I/O or power line
- Low Clamping Voltage
- Ultra Low Capacitance: 0.5pF
- Working Voltage: 5 V
- Low Leakage Current
- Response Time is Typically  $< 1$  ns



**SOD-523**

### IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 15$  kV (air),  $\pm 8$  kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

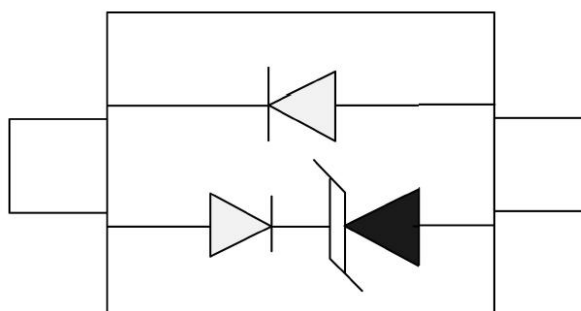
### Mechanical Characteristics

- JEDEC SOD-523 package
- Molding compound flammability rating: UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS/WEEE Compliant

### Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 players

### Schematic & PIN Configuration



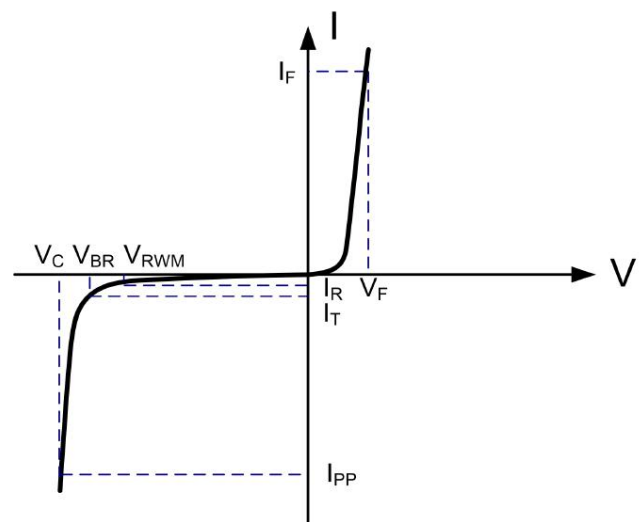
SOD-523 (Top View)



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PP}$	200	Watts
Peak Forward Voltage ( $I_F=1A, t_p=8/20\mu s$ )	$V_{FP}$	1.4	V
Operating Temperature	$T_J$	-55 to +125	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}C$

### Electrical Parameters ( $T=25^{\circ}C$ )

Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



### Electrical Characteristics

PT5A051L						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5.0	V



Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	6.0			V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V, T=25^\circ C$			1	$\mu A$
Peak Pulse Current	$I_{pp}$	$t_p=8/20\mu s$			5	A
Clamping Voltage	$V_C$	$I_{PP}=5A, t_p=8/20\mu s$			13.6	V
Junction Capacitance	$C_j$	$V_R=0V, f=1MHz$		0.5	0.8	pF

### Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

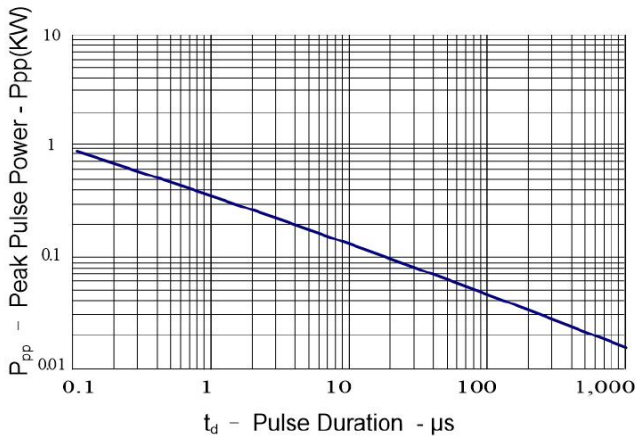


Figure 2: Power Derating Curve

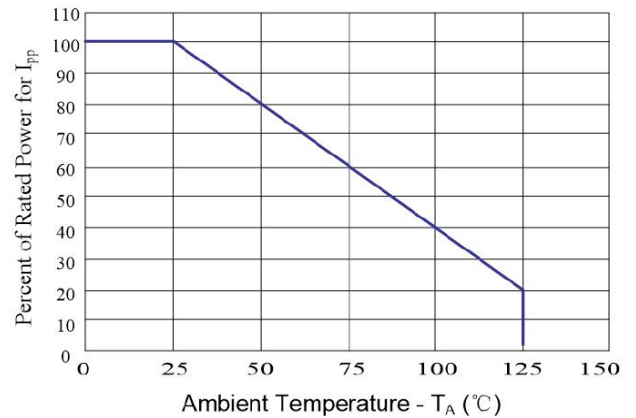
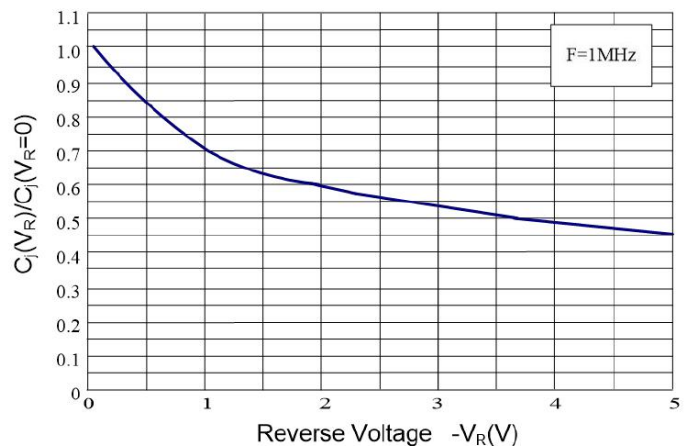


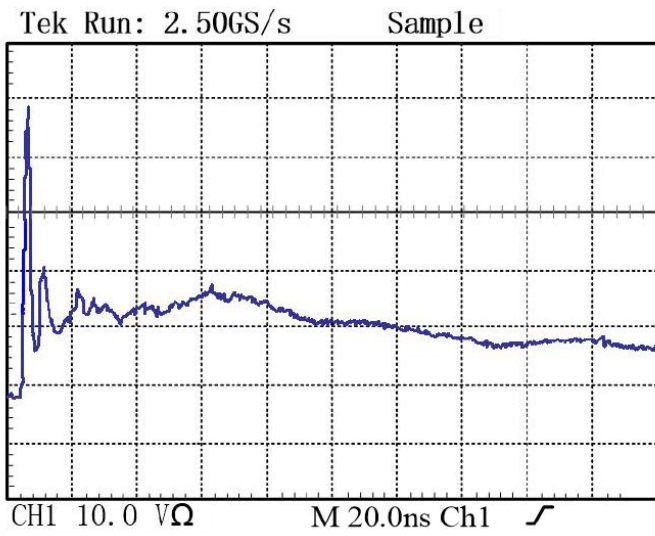
Figure 3: Insertion Loss



Figure 4: Normalized Junction Capacitance vs. Reverse Voltage



**Figure 5: ESD Clamping( 8kV Contact per IEC 61000-4-2)**



### Outline Drawing – SOD-523

