



## 400W LOW CLAMPING VOLTAGE SINGLE TVS FOR PROTECTION

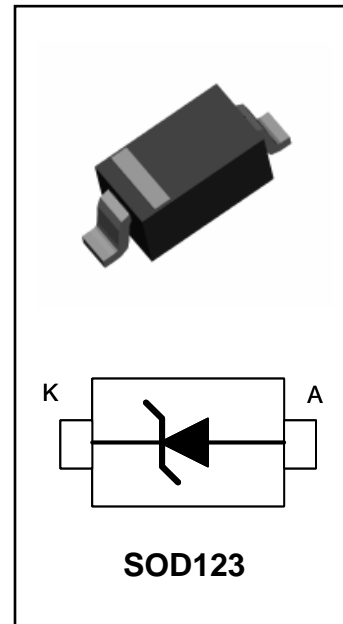
This TVS/Zener Series has been designed to Protect Sensitive Equipment against ESD and to prevent Latch-Up events in very sensitive CMOS circuitry operating at 5V, 12V, 15V and 24Vdc .These devices come in an industry standard SOD123 package making them suitable for Portable/Computing Electronics, where the board space is a premium.

### SPECIFICATION FEATURES

- 400W Power Dissipation (8/20µs Waveform)
- Very Low Leakage Current
- IEC61000-4-2 ESD 15kV air, 8kV Contact Compliance
- SOD123 Package

### APPLICATIONS

- Personal Digital Assistant (PDA)
- Digital Cameras
- Portable Instrumentation
- Mobile Phones and Accessories
- Desktops, Laptops



### MAXIMUM RATINGS

Rating	Symbol	Value	Units
Peak Pulse Power (8/20µs Waveform)	$P_{pp}$	400	W
ESD Voltage (HBM)	$V_{ESD}$	25	kV
Operating Temperature Range	$T_J$	-55 to +125	°C
Storage Temperature Range	$T_{stg}$	-55 to +150	°C

### ELECTRICAL CHARACTERISTICS $T_j = 25^\circ\text{C}$

#### PJSD05

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{WRM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR} = 1\text{ mA}$	6.0			V
Reverse Leakage Current	$I_R$	$V_R = 5\text{V}$			20	µA
Clamping Voltage (8/20µs)	$V_c$	$I_{pp} = 5\text{A}$			7.5	V
Clamping Voltage (820µs)	$V_c$	$I_{pp} = 24\text{A}$			16	V
Off State Junction Capacitance	$C_j$	0 Vdc Bias f = 1MHz			550	pF
Off State Junction Capacitance	$C_j$	5 Vdc Bias f = 1MHz			235	pF

**ELECTRICAL CHARACTERISTICS**  $T_j = 25^\circ\text{C}$ 
**PJSD12**

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{WRM}$				12	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR} = 1\text{mA}$	13.3			V
Reverse Leakage Current	$I_R$	$V_R = 12\text{V}$			1	$\mu\text{A}$
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_C$	$I_{pp} = 5\text{A}$			14.5	V
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_C$	$I_{pp} = 17\text{A}$			23	V
Off State Junction Capacitance	$C_j$	0 Vdc Bias $f = 1\text{MHz}$			180	pF

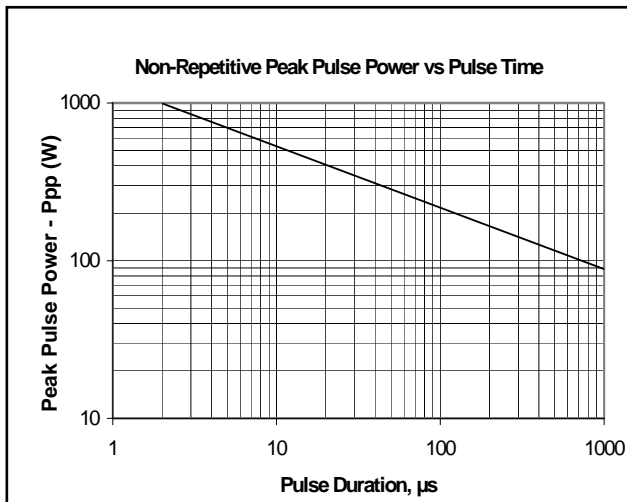
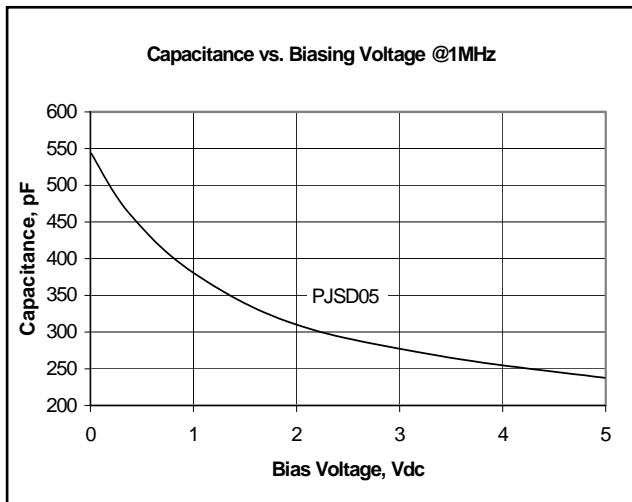
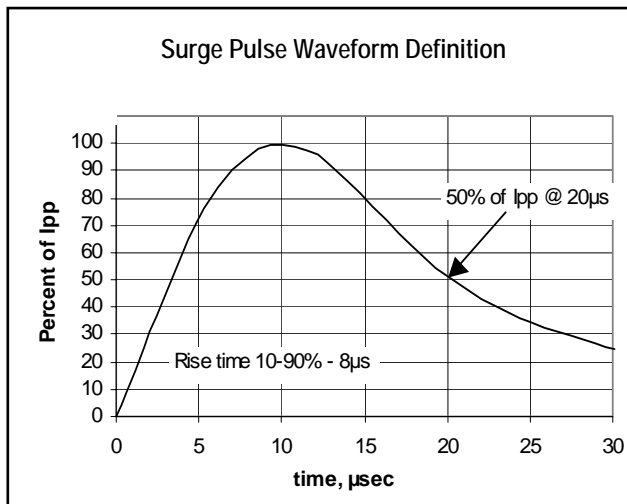
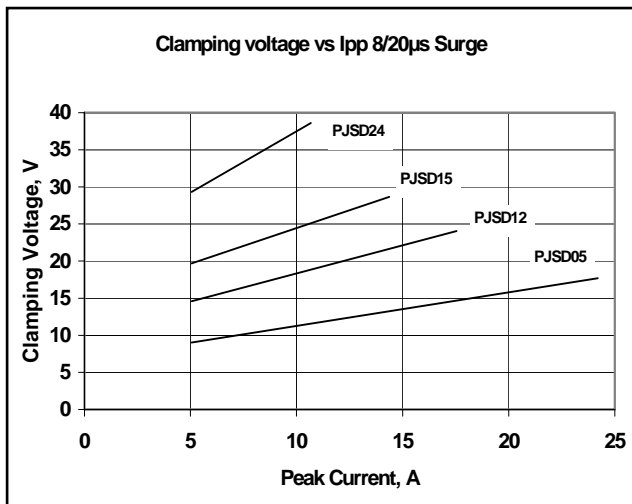
**PJSD15**

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{WRM}$				15	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR} = 1\text{mA}$	16.7			V
Reverse Leakage Current	$I_R$	$V_R = 15\text{V}$			1	$\mu\text{A}$
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_C$	$I_{pp} = 5\text{A}$			19	V
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_C$	$I_{pp} = 14\text{A}$			28	V
Off State Junction Capacitance	$C_j$	0 Vdc Bias $f = 1\text{MHz}$			165	pF

**PJSD24**

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{WRM}$				24	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR} = 1\text{mA}$	26.7			V
Reverse Leakage Current	$I_R$	$V_R = 24\text{V}$			1	$\mu\text{A}$
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_C$	$I_{pp} = 5\text{A}$			29	V
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_C$	$I_{pp} = 11\text{A}$			37	V
Off State Junction Capacitance	$C_j$	0 Vdc Bias $f = 1\text{MHz}$			120	pF

TYPICAL CHARACTERISTICS





PACKAGE DIMENSIONS AND BOND PAD LAYOUT

