



400W LOW CLAMPING VOLTAGE SINGLE TVS FOR PROTECTION

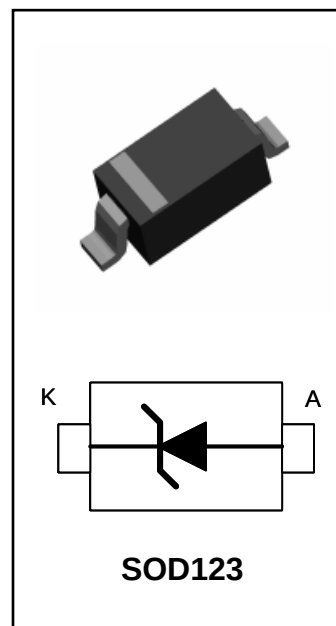
This TVS/Zener Series has been designed to Protect Sensitive Equipment against ESD and to prevent Latch-Up events in very sensitive CMOS circuitry operating at 5V, 12V, 15V and 24Vdc. These devices come in an industry standard SOD123 package making them suitable for Portable/Computing Electronics, where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

SPECIFICATION FEATURES

- 400W Power Dissipation (8/20 μ s 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 (8/20 μ s 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 (8/20 μ s)	V_C	$I_{pp} = 5 \text{ A}$			7.5	V
Clamping Voltage (820 μ s)	V_C	$I_{pp} = 24 \text{ A}$			16	V
Off State Junction Capacitance	C_j	0 Vdc Bias $f = 1 \text{ MHz}$			550	pF
Off State Junction Capacitance	C_j	5 Vdc Bias $f = 1 \text{ MHz}$			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	μA
Clamping Voltage (8/20 μs)	V_c	$I_{pp} = 5\text{A}$			14.5	V
Clamping Voltage (8/20 μs)	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

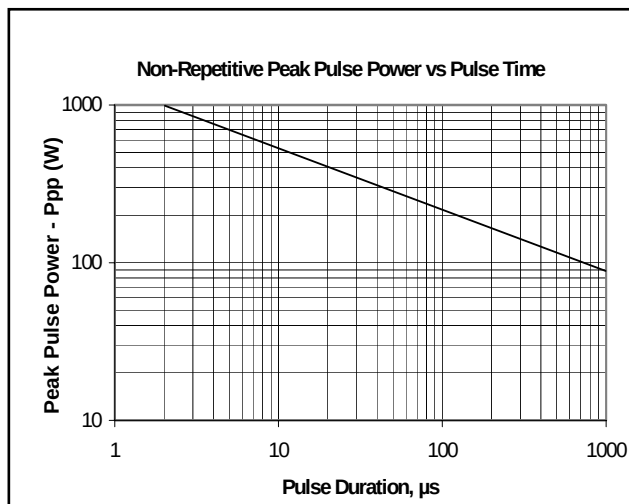
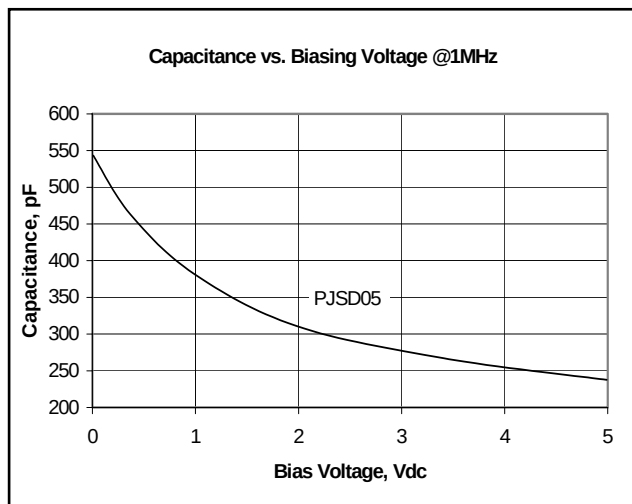
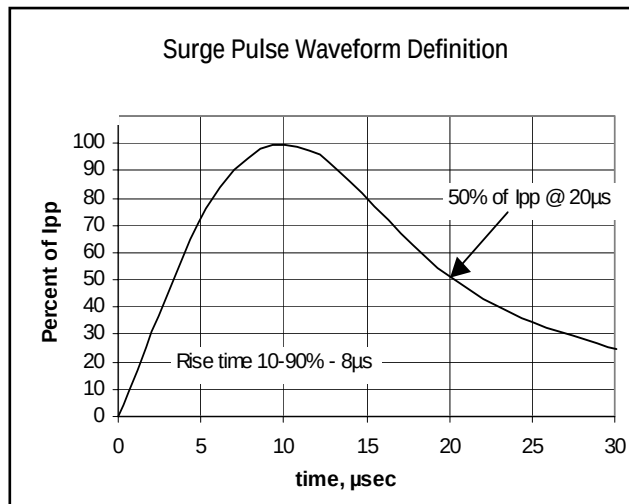
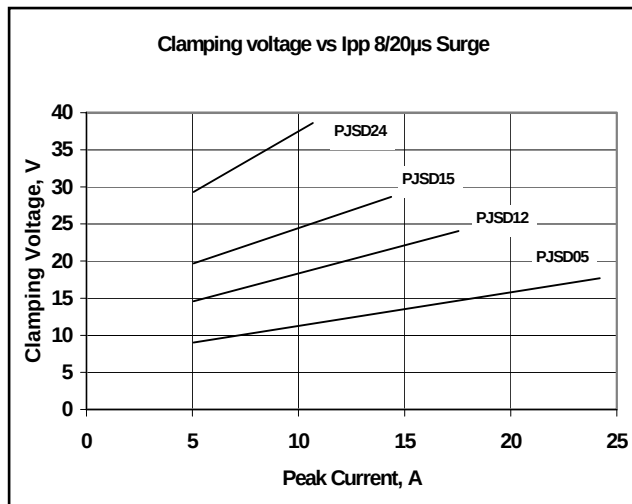
Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				15	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1\text{mA}$	16.7			V
Reverse Leakage Current	I_R	$V_R = 15\text{V}$			1	μA
Clamping Voltage (8/20 μs)	V_c	$I_{pp} = 5\text{A}$			19	V
Clamping Voltage (8/20 μs)	V_c	$I_{pp} = 14\text{A}$			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	μA
Clamping Voltage (8/20 μs)	V_c	$I_{pp} = 5\text{A}$			29	V
Clamping Voltage (8/20 μs)	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

