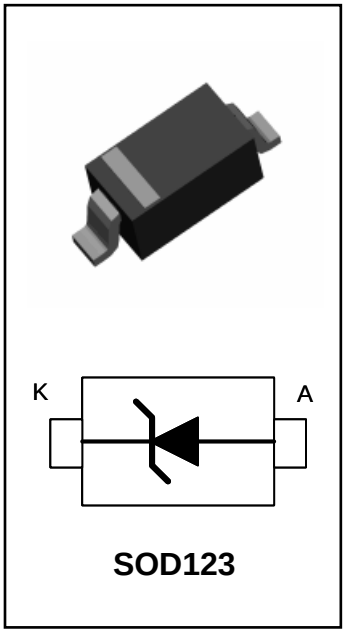
400W LOW CLAMPING VOLTAGE SINGLE TVS FOR PROTECTION

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.



SOD123

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 Tj = 25°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 mA	6.0			V
Reverse Leakage Current	I_R	V_R =5V			20	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} =5A			7.5	V
Clamping Voltage (820µs)	V_c	I_{pp} =24A			16	V
Off State Junction Capacitance	Cj	0 Vdc Bias f = 1MHz			550	pF
Off State Junction Capacitance	Cj	5 Vdc Bias f = 1MHz			235	pF

ELECTRICAL CHARACTERISTICS Tj = 25°C

PJSD12

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

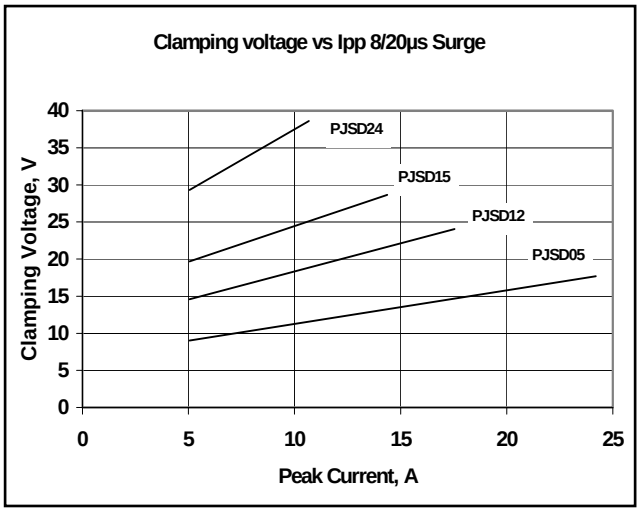
PJSD15

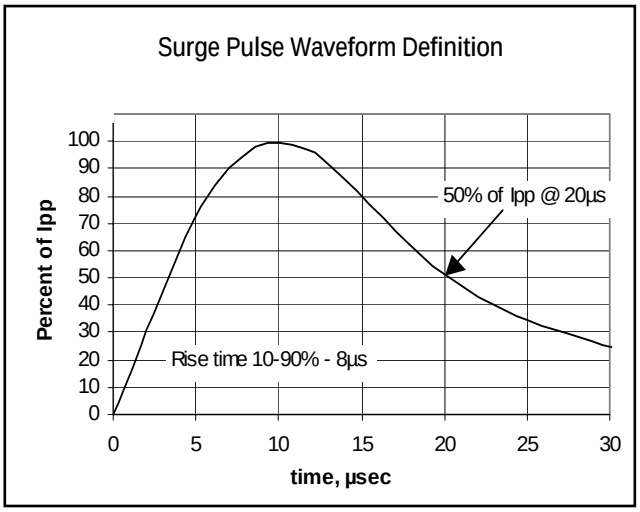
Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				15	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} =1mA	16.7			V
Reverse Leakage Current	I_R	V_R = 15V			1	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} = 5A			19	V
Clamping Voltage (8/20µs)	V_c	I_{pp} = 14A			28	V
Off State Junction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

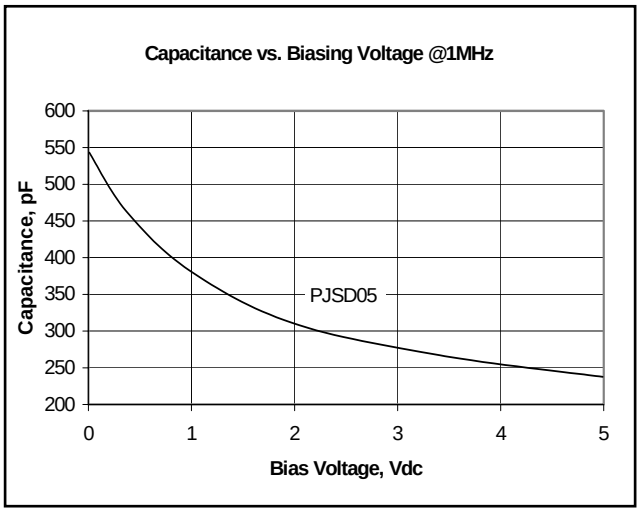
PJSD24

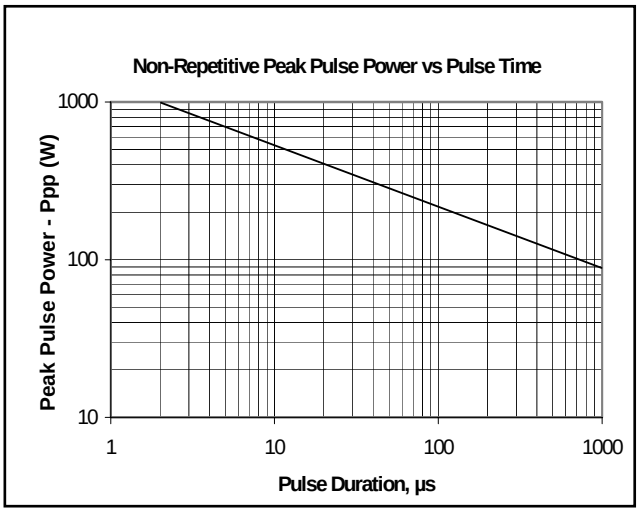
Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				24	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} =1mA	26.7			V
Reverse Leakage Current	I_R	V_R = 24V			1	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} = 5A			29	V
Clamping Voltage (8/20µs)	V_c	I_{pp} = 11A			37	V
Off State Junction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

TYPICAL CHARACTERISTICS



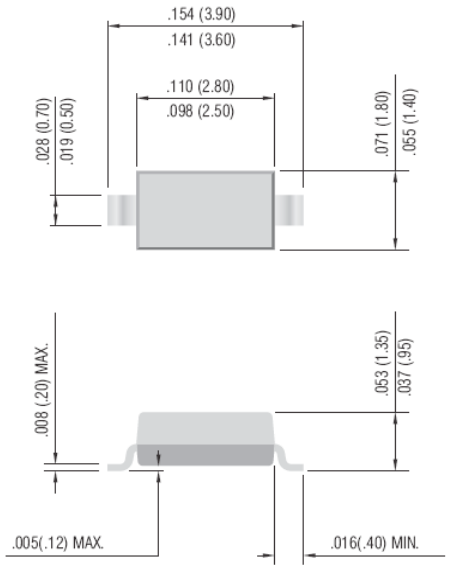






PACKAGE DIMENSIONS AND BOND PAD LAYOUT

SOD-123 Unit: inch (mm)



SOD-123 Unit: inch (mm)