SESD1N2812PF

Transient Voltage Suppression Diode

Features

- 6750Watts peak pulse power (tp =8/20μs)
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 ±30kV contact ±30kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 150A (8/20μs)

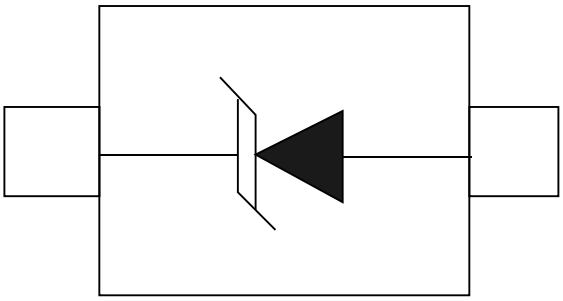
Applications

- Microprocessor based equipment
- RS232, RS485 Interfaces
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Power line protection
- Peripherals

Mechanical Data

- SOD-123FL package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration



SOD-123FL

Absolute Maximum Rating

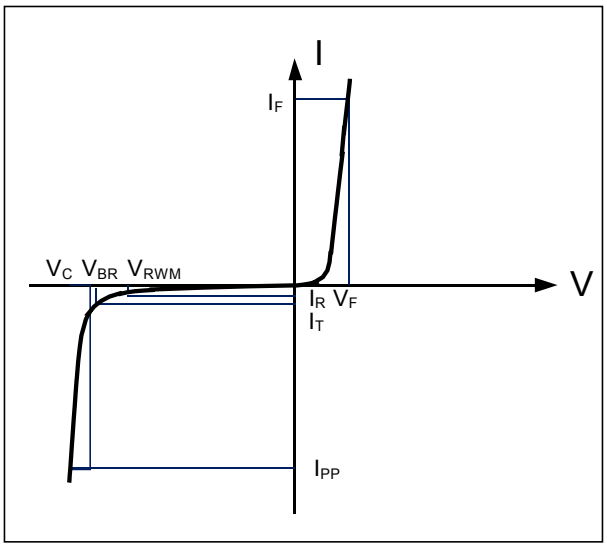
Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	6750	Watts
Peak Pulse Current (t_p =8/20μs) (note1)	I_{pp}	150	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 150	℃
Storage Temperature	T_{stg}	-55 to + 150	℃

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				28	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	31.1			V
Reverse Leakage Current	I_R	V_{RWM}=12V,T=25℃			1	uA
Clamping Voltage	V_C	I_{PP}=150A,t_p=8/20μs		45		V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		270		pF

Electrical Parameters (TA = 25°C unless otherwise noted)

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



Note:. 8/20μs pulse waveform.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

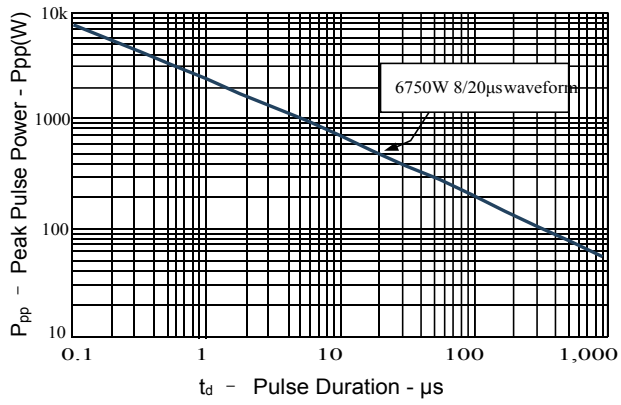


Figure 2: Power Derating Curve

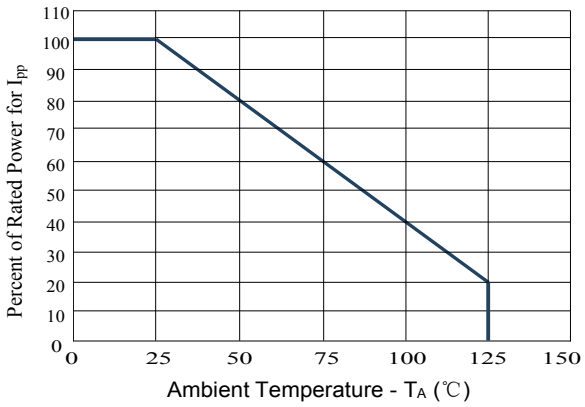


Figure3: Pulse Waveform

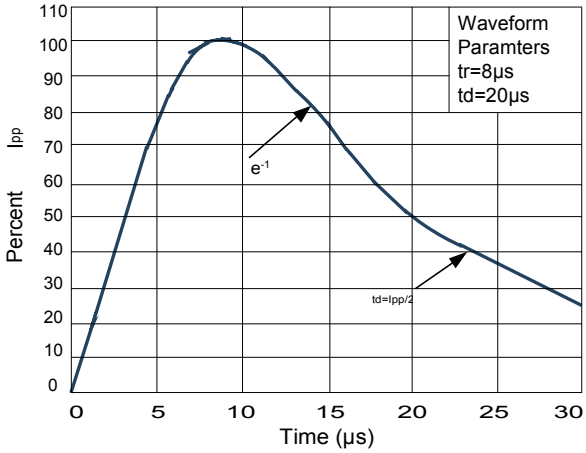
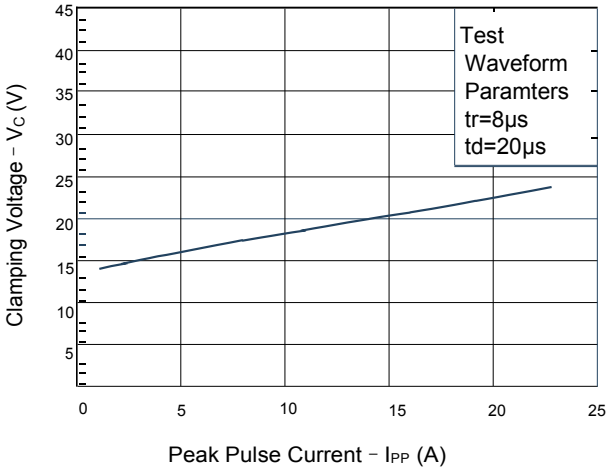
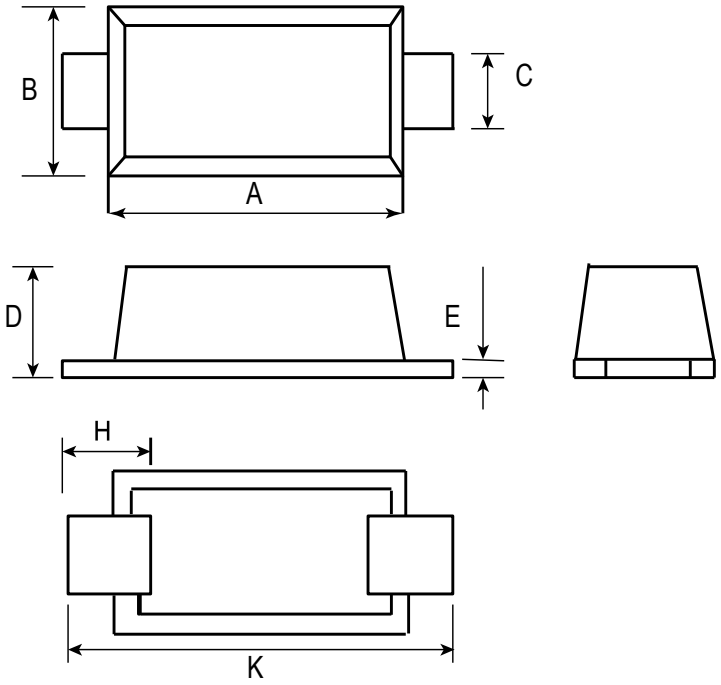


Figure 4: Clamping Voltage vs.Ipp



Outline Drawing – SOD123FL



DIM	Millimeters		
	Min	Nom	Max
A	2.70	2.80	2.90
B	1.80	1.90	2.00
C	0.80	1.00	1.20
D			1.00
E	0.10	0.20	0.30
H	0.35		0.85
K	3.50		3.90

Marking

Ordering information

Order code	Package	Base qty	Delivery mode
SESD1N2812PF	SOD-123FL	3000	Tape and reel