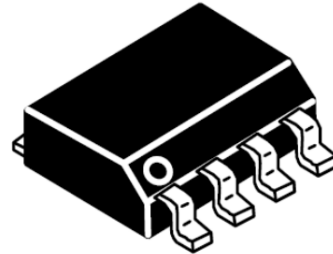


Low Capacitance TVS Diode Array For High-Speed Data Interfaces

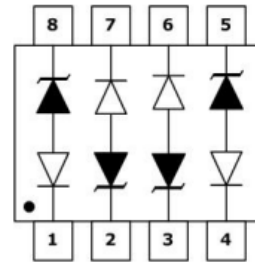
Features

- Ultra low leakage: nA level
- Operating voltage: 12V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 15\text{kV}$
Contact discharge: $\pm 8\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 24A (8/20 μs)
- RoHS Compliant

Dimensions SOP-08



Pin Configuration



Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

Mechanical Characteristics

- Package: SOP-08
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:500pcs
- Reel Size:7 inch

Absolute Maximum Ratings($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppp	800	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 15	Kv
ESD per IEC 61000-4-2 (Contact)		± 8	
Operating Temperature Range	T _J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T _{STJ}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics(TA=25°C unless otherwise specified)

Part Number	Device Marking	V _{RWM} (V)	V _{BR} (V)	I _T (mA)	V _C @1A	V _C		I _R μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
SM8LC12	SM8LC12	12	13.3	1	19	33	25	1	15

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

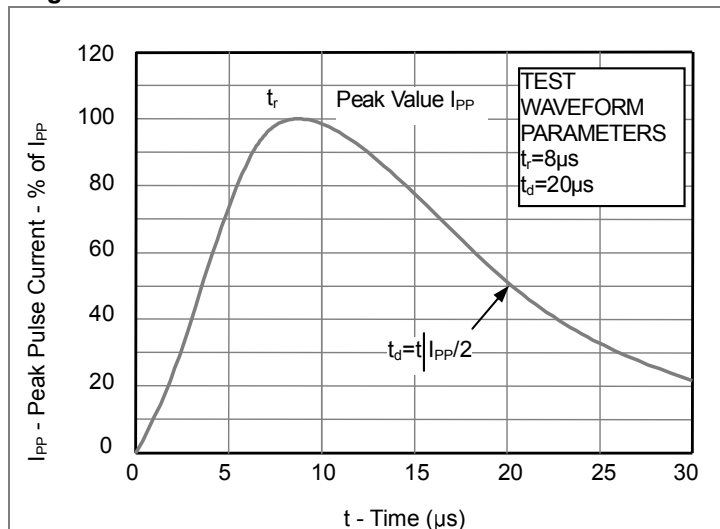


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

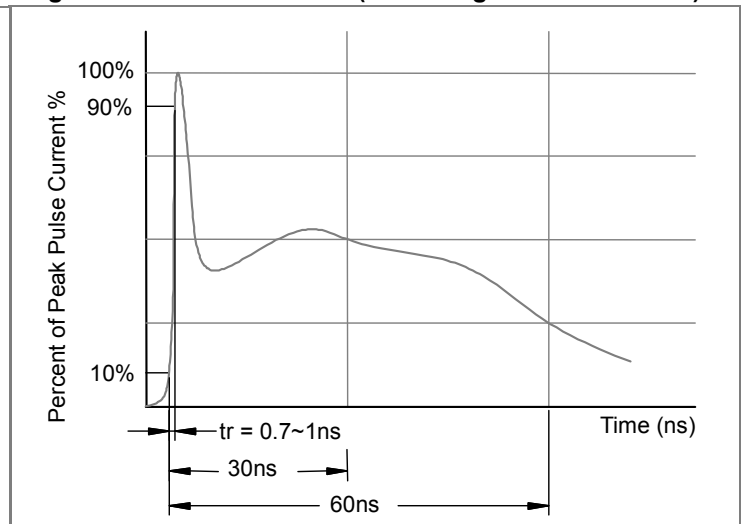
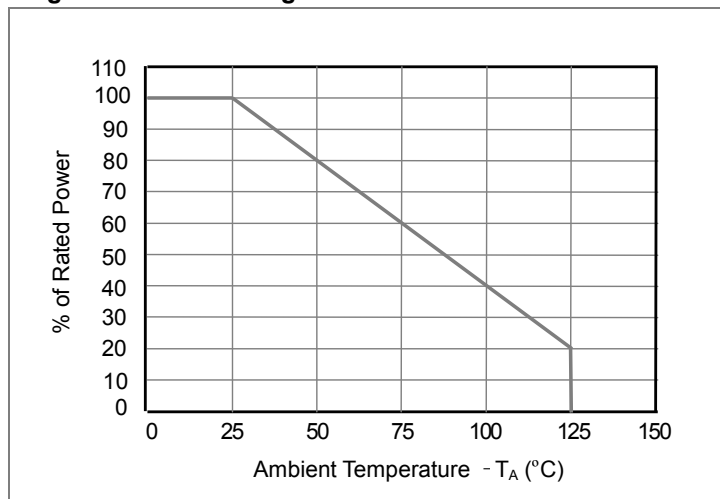
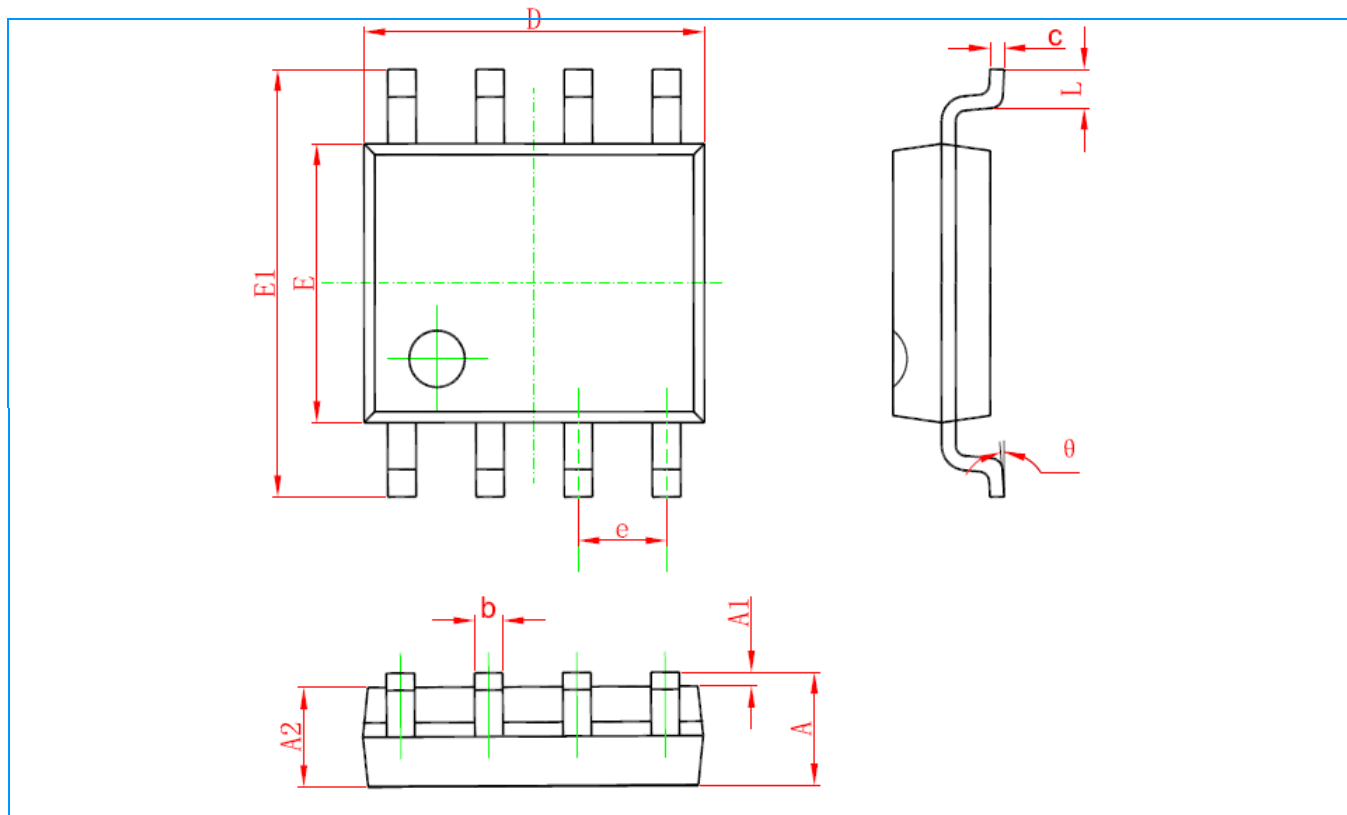


Fig3. Power Derating Curve



SOP-08 Mechanical Data



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270 (BSC)		0.050 (BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°