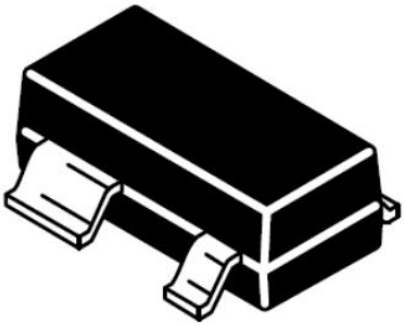
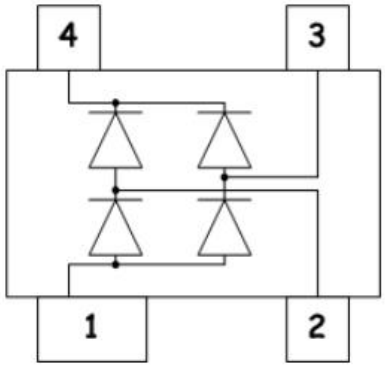
ESDSR70

Features

- Ultra low leakage: nA level
- Operating voltage: 70V
- Low clamping voltage
- Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±15kV
    - Contact discharge: ±8kV
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
  - – IEC61000-4-5 (Lightning) 24A (8/20μs)



Functional Diagram



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: SOT-143
- Lead Finish: Lead Free
- Quantity Per Reel:3,000pcs
- Reel Size:7inch

Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P_{PP}	24	Watts
ESD per IEC 61000−4−2 (Air)	V_{ESD}	±15	KV
ESD per IEC 61000−4−2 (Contact)		±8	KV
Operating Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{STJ}	-55 to +150	°C

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

Part Number	V_{RWM} (V)	V_{BR} (V)	I_T (mA)	V_C @1A	V_C		I_R μA (Max)	C (PF) (Typ.)
					(Max)	(@A)		
ESDSR70	70	100	50	1.5	8	24	1	5

Characteristics Curves

Figure 1- Power Derating Curve

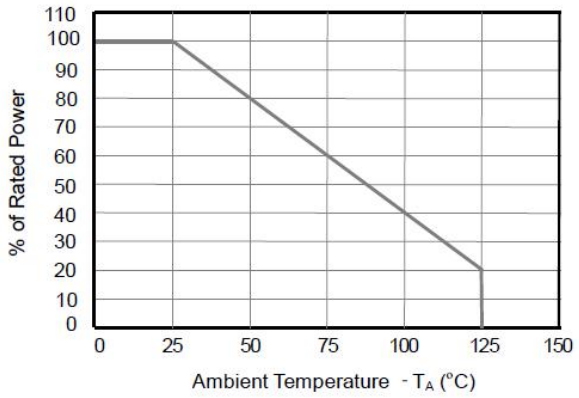


Figure 2- ESD Pulse Waveform
(according to IEC 61000-4-2)

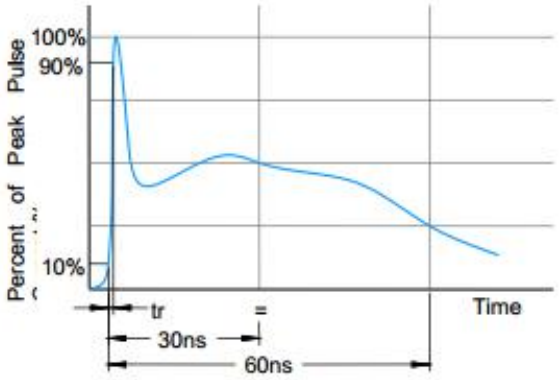
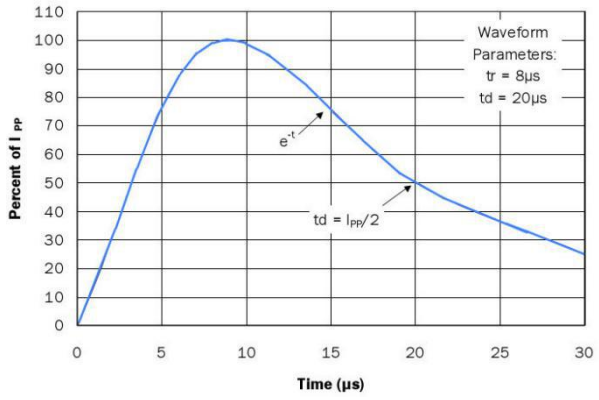
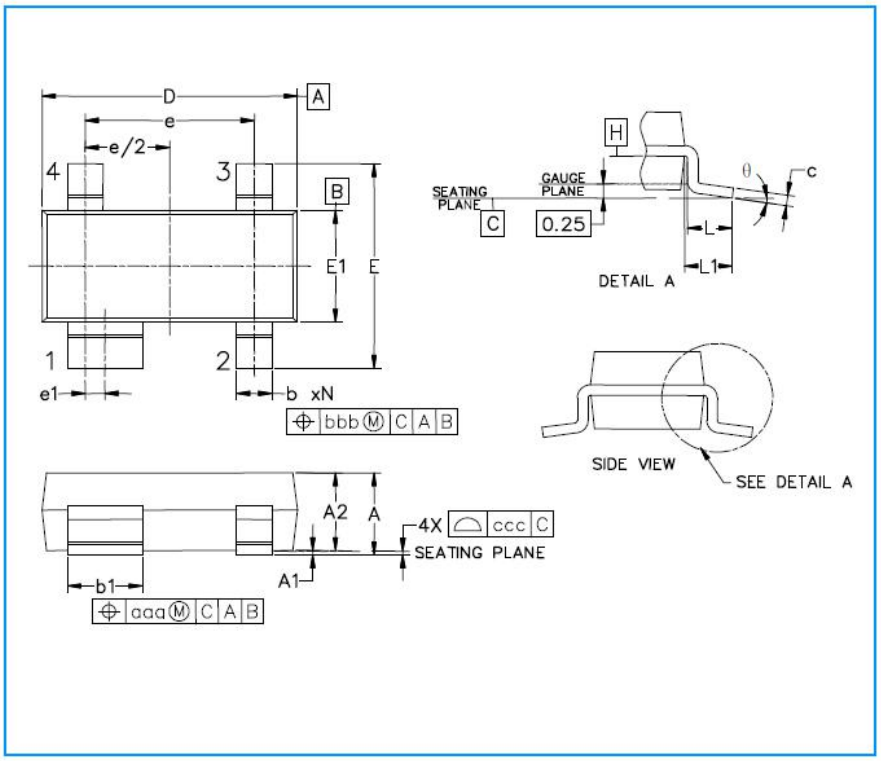


Figure3- 8/20μs Pulse Waveform

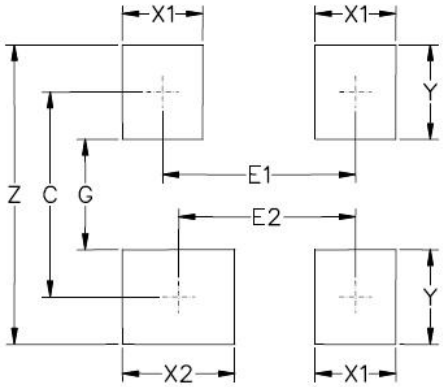


ACKAGE OUTLINE DIMENSIONS in millimeters (inches) :SOT-143



Symbol	Inches			Millimeters		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.031	-	0.048	0.80	-	1.22
A1	0.000	-	0.008	0.013	-	0.15
A2	0.020	0.035	0.042	0.75	0.90	1.07
b	0.011	-	0.020	0.30	-	0.51
b1	0.029	-	0.037	0.76	-	0.94
c	0.003	-	0.008	0.08	-	0.20
D	0.110	0.114	0.120	2.80	2.90	3.04
E	0.082	0.093	0.104	2.10	2.37	2.64
E1	0.047	0.051	0.055	1.20	1.30	1.40
e	0.075			1.92 BSC		
e1	0.008			0.20 BSC		
L	0.015	0.020	0.024	0.40	0.50	0.60
L1	(0.021)			(0.54)		
N	4			4		
θ	0°	-	8°	0°	-	8°
aaa	0.006			0.15		
bbb	0.008			0.20		
ccc	0.004			0.10		

Soldering Footprint



Symbol	Inches	Millimeters
C	(0.087)	(2.20)
E1	0.076	1.92
E2	0.068	1.72
G	0.031	0.80
X1	0.039	1.00
X2	0.047	1.20
Y	0.055	1.40
Z	0.141	3.60

Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.