

Features

- Ultra low capacitance: 3pF typical
- Ultra low leakage: nA level
- Protects Two I/O lines
- Low clamping voltage
- Complies with following standards:
 - – IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - – IEC61000-4-5 (Lightning)24A (8/20 μs)
- RoHS Compliant

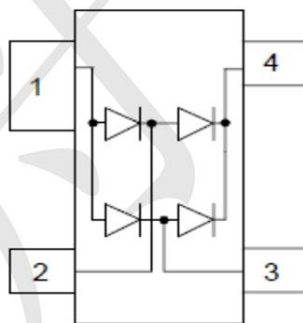
Mechanical Characteristics

- Package: SOT143
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty :3000pcs/7Inch Tape & Reel

Applications

- Portable Electronics
- T1/E1 secondary IC Side Protection
- WAN/LAN Equipment
- ISDN S/T Interface
- Digital Cameras

Dimensions and Pin Configuration



Marking: R70

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

Parameter	Symbol	Value	Unit
Peak Pulse Current (8/20μs)	Ipp	24	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			70	V	
Breakdown Voltage	VBR	85			V	IT = 50uA
Reverse Leakage Current	IR			1	uA	VRWM = 5V
Clamping Voltage	VC			1.5	V	Ipp=1A(8x 20us pulse)
Clamping Voltage	VC			7	V	Ipp=24A(8x 20us pulse)
Junction Capacitance	CJ		3		pF	VR = 0V, f = 1MHz, IO to IO

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

Fig1. 8/20 μs Pulse Waveform

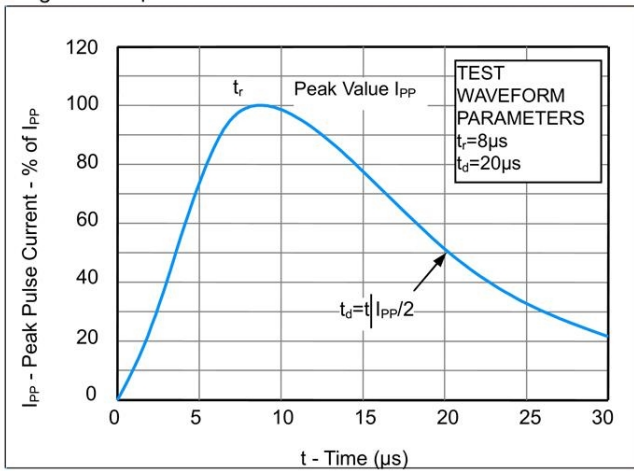


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

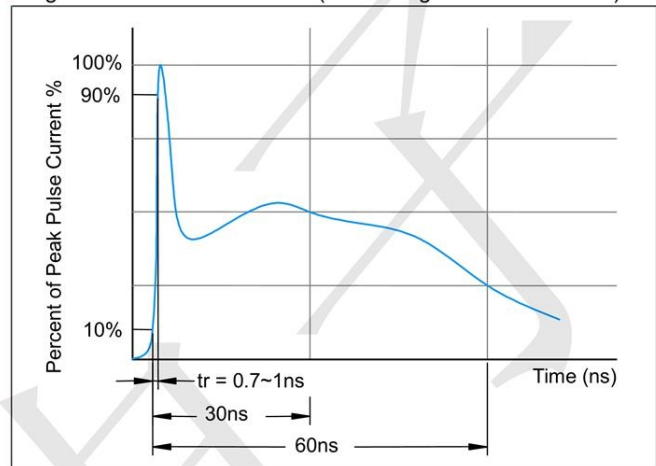
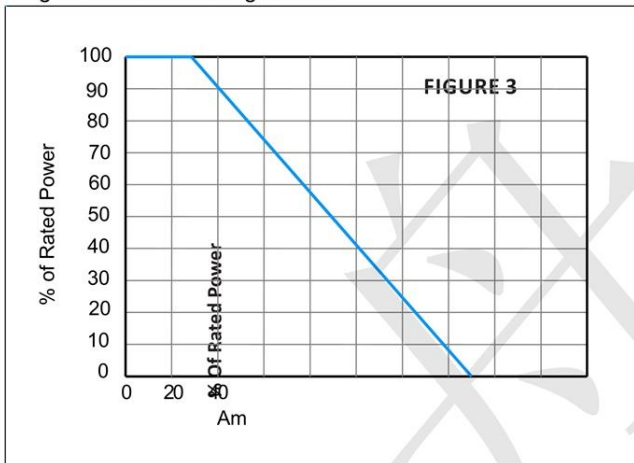
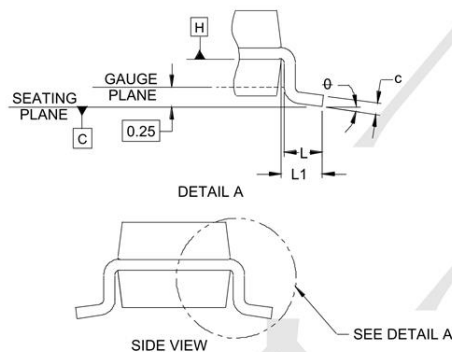
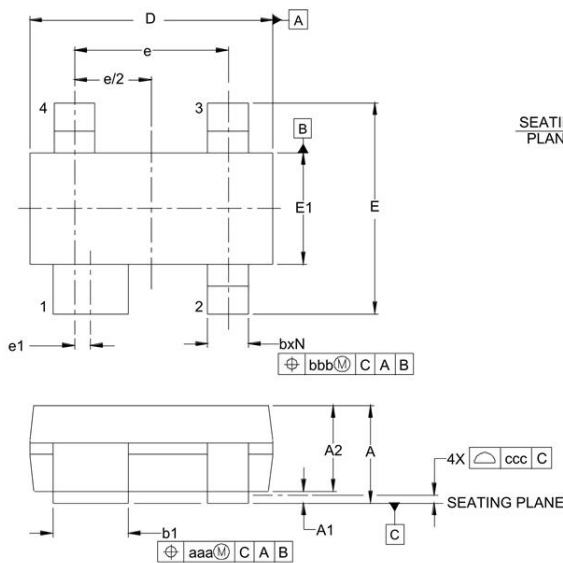


Fig3. Power Derating Curve

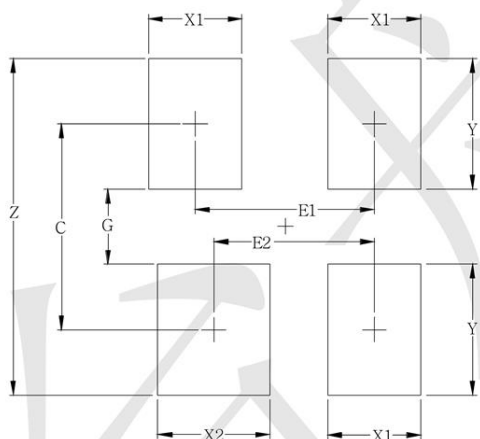


Outline Drawing - SOT-143



DIM	INCHES		MILLIMETERS	
	MIN	NOM	MIN	MAX
A	.031	-	.048	0.80
A1	.000	-	.006	0.15
A2	.029	.035	.042	0.75
b	.011	-	.020	0.30
b1	.029	-	.037	0.76
c	.003	-	.008	0.08
D	.110	.114	.120	2.80
E	.082	.093	.104	2.10
E1	.047	.051	.055	1.20
e	.075	-	-	1.92 BSC
e1	.008	-	-	0.20 BSC
L	.015	.020	.024	0.40
L1	(.021)	-	-	0.50
N	4	-	-	4
φ	0°	-	8°	0°
aaa	.006	-	-	0.15
bbb	.008	-	-	0.20
ccc	.004	-	-	0.10

Land Pattern -SOT-143



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	2.20	0.087
E1	1.92	0.076
E2	1.72	0.068
G	0.80	0.031
X1	1.00	0.039
X2	1.20	0.047
Y	1.40	0.055
Z	3.60	0.141