

Features

- Working voltage: 3.3V
- 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) 20A (8/20 μs)
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

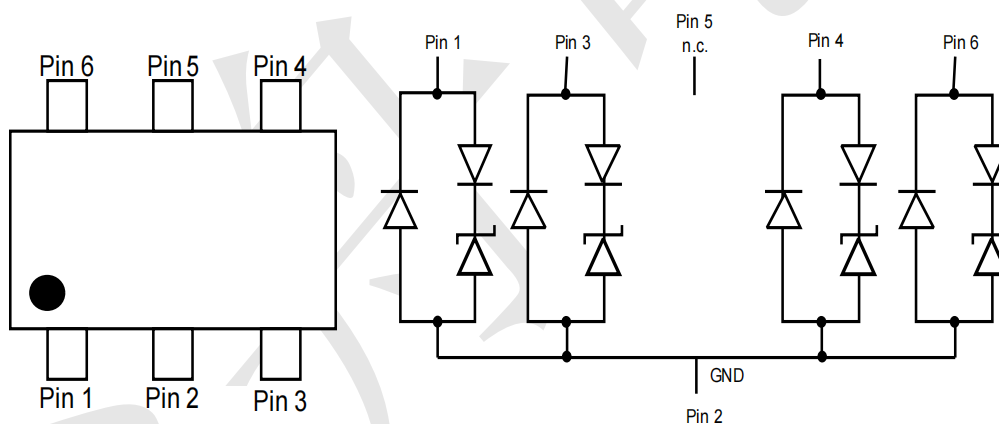
Mechanical Characteristics

- Package: SOT23-6
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Shipping Qty : 3000pcs/7Inch Tape & Reel

Applications

- 10/100/1000 Ethernet
- 4 lines uni-directional (Pin 2 to GND)
- 2 lines bi-directional (Pin 2 n.c.)

Dimensions and Pin Configuration



Marking:E1s

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	200	W
Peak Pulse Current (8/20 μs)	I _{PP}	20	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	± 30 ± 30	kV
Operating Temperature Range	T _J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T _{stg}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			3.3	V	
Breakdown Voltage	V _{BR}	4.2			V	I _T = 1mA
Reverse Leakage Current	I _R			0.1	μA	V _{RWM} = 3.3V
Forward Voltage	V _F		0.85	1.2	V	I _F = 15mA
Clamping Voltage	V _C		8		V	I _{PP} = 1A(8x20 μs pulse)
Clamping Voltage	V _C		10		V	I _{PP} = 20A(8x20 μs pulse)
Junction Capacitance	C _J		2	3	pF	V _R = 0V, f = 1MHz IO to GND
Junction Capacitance	C _J		1		pF	V _R = 0V, f = 1MHz IO to IO

Fig1. 8/20 μ s Pulse Waveform

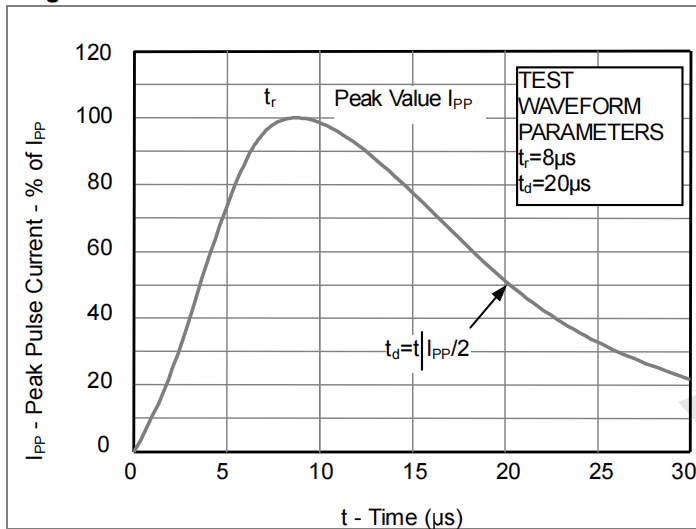


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

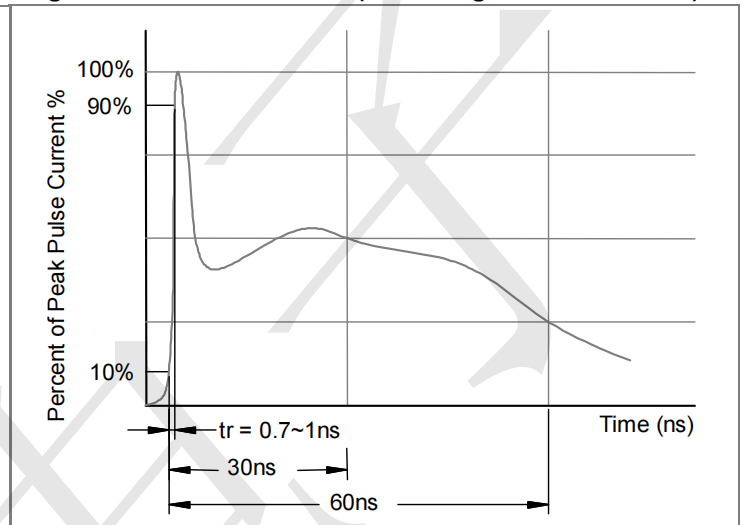
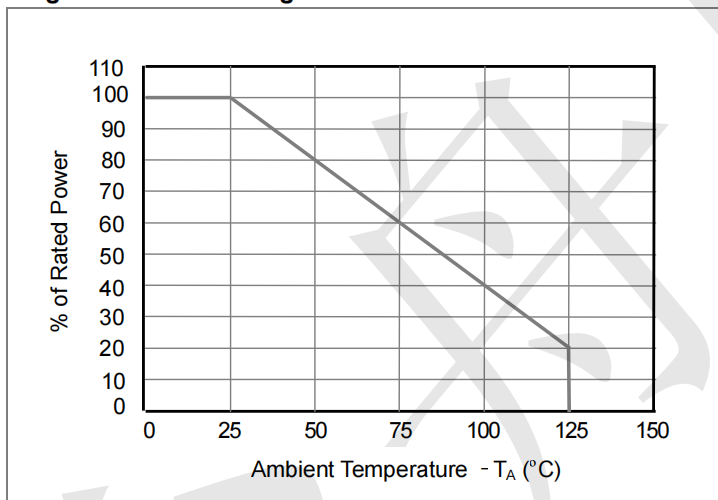
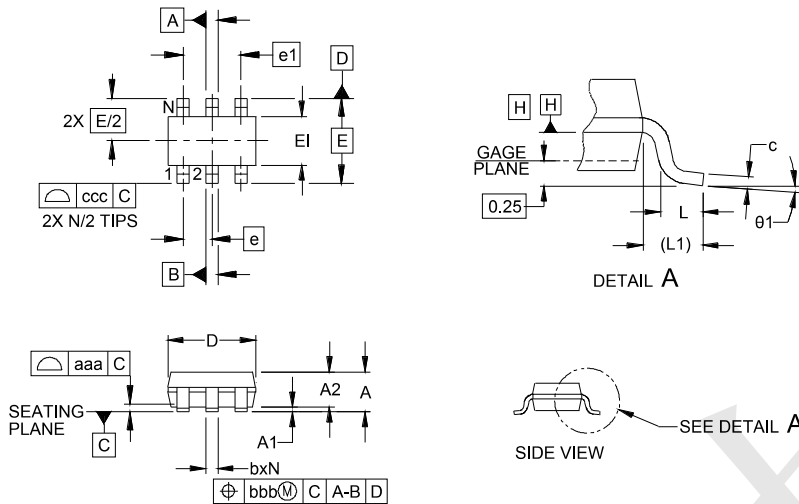


Fig3. Power Derating Curve

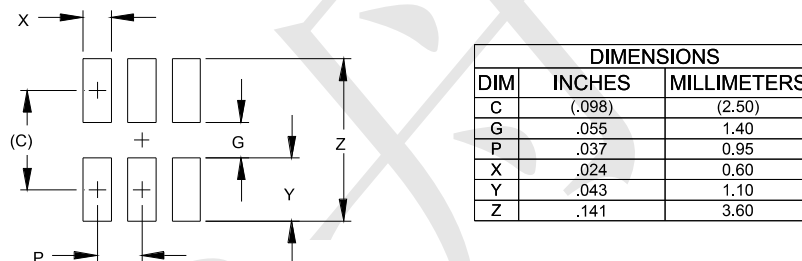


Outline Drawing - SOT23-6



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.035	-	.057	0.90	-	1.45
A1	.000	-	.006	0.00	-	0.15
A2	.035	.045	.051	.90	1.15	1.30
b	.010	-	.020	0.25	-	0.50
c	.003	-	.009	0.08	-	0.22
D	.110	.114	.118	2.80	2.90	3.00
E1	.060	.063	.069	1.50	1.60	1.75
E	.110	BSC		2.80	BSC	
e	.037	BSC		0.95	BSC	
e1	.075	BSC		1.90	BSC	
L	.012	.018	.024	0.30	0.45	0.60
L1		(.024)			(0.60)	
N	6			6		
$\theta 1$	0°	-	10°	0°	-	10°
aaa	.004			0.10		
bbb	.008			0.20		
ccc	.008			0.20		

Land Pattern - SOT23-6



DIM	DIMENSIONS	
	INCHES	MILLIMETERS
C	(.098)	(2.50)
G	.055	1.40
P	.037	0.95
X	.024	0.60
Y	.043	1.10
Z	.141	3.60