

Features

- Ultra low leakage: nA level
- Ultra low operating voltage: 3.6V
- Ultra low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 80A (5/50ns)
 - IEC61000-4-5 (Lightning) 10A (8/20 μs)
- RoHS Compliant
- ESD304DBVR Pin to Pin fully compatible

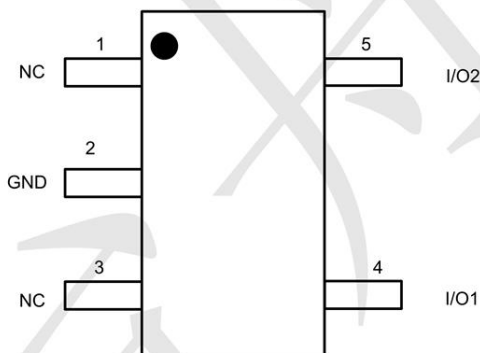
Mechanical Characteristics

- Package: SOT23-5
- Lead Finish: NiPdAu
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: See Diagram Below

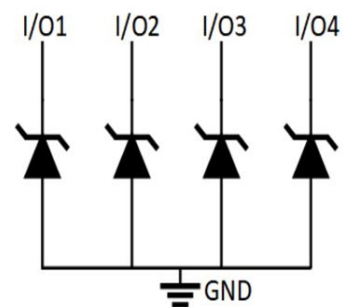
Applications

- Ethernet Switches
- Access Points
- Gateways
- Printers
- DVR and NVR

Dimensions and Pin Configuration



Marking: 1R3B



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	100	W
Peak Pulse Current (8/20μs)	Ipp	10	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			3.6	V	
Breakdown Voltage	VBR	4.5			V	IT = 1mA
Reverse Leakage Current	IR			0.1	uA	VRWM = 3.6V
Forward Voltage	Vf		0.8	1.2	V	Io = 1mA IO to GND
Clamping Voltage	VC		5.8	9.0	V	Ipp=1A(8x 20us pulse)
Clamping Voltage	VC		7	10	V	Ipp=10A(8x 20us pulse)
Junction Capacitance	CJ		1.2	1.5	pF	VR = 0V, f = 1MHz IO to GND
Junction Capacitance	CJ		0.6	0.7	pF	VR = 0V, f = 1MHz IO to IO

Typical characteristics ($T_A=25\text{ C}$, unless otherwise noted)

Fig1. 8/20 μ s Pulse Waveform

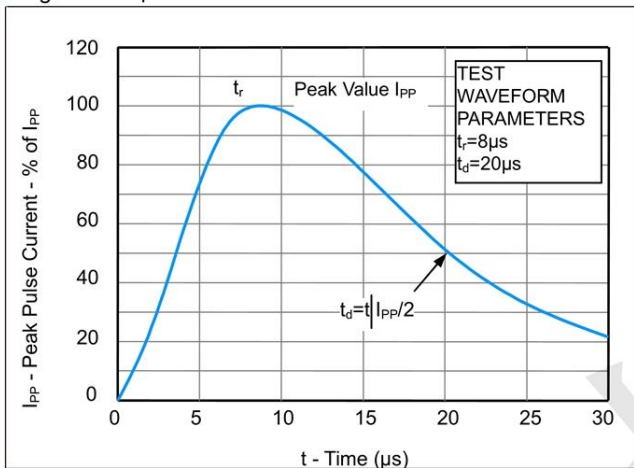


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

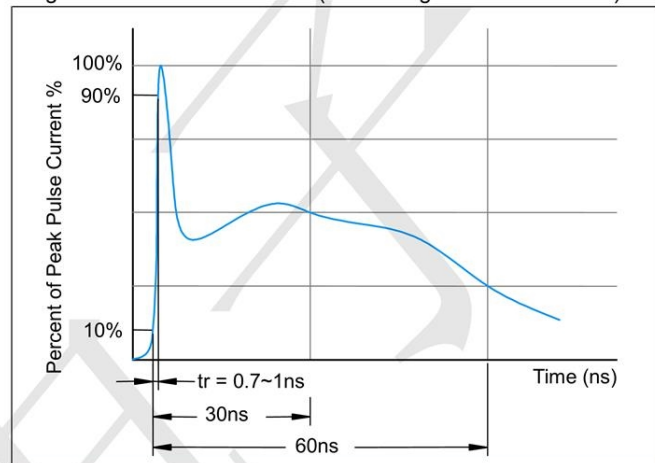
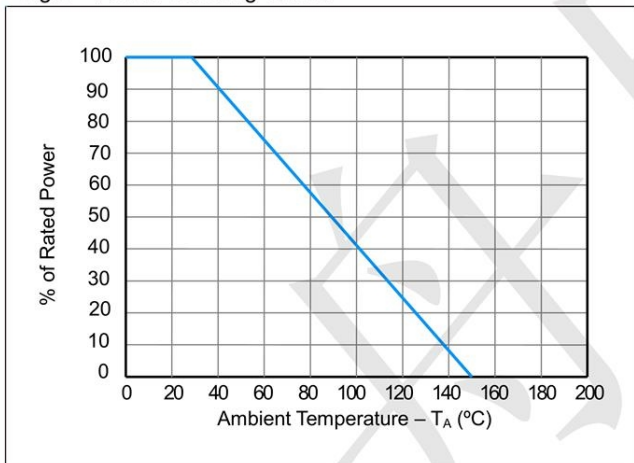
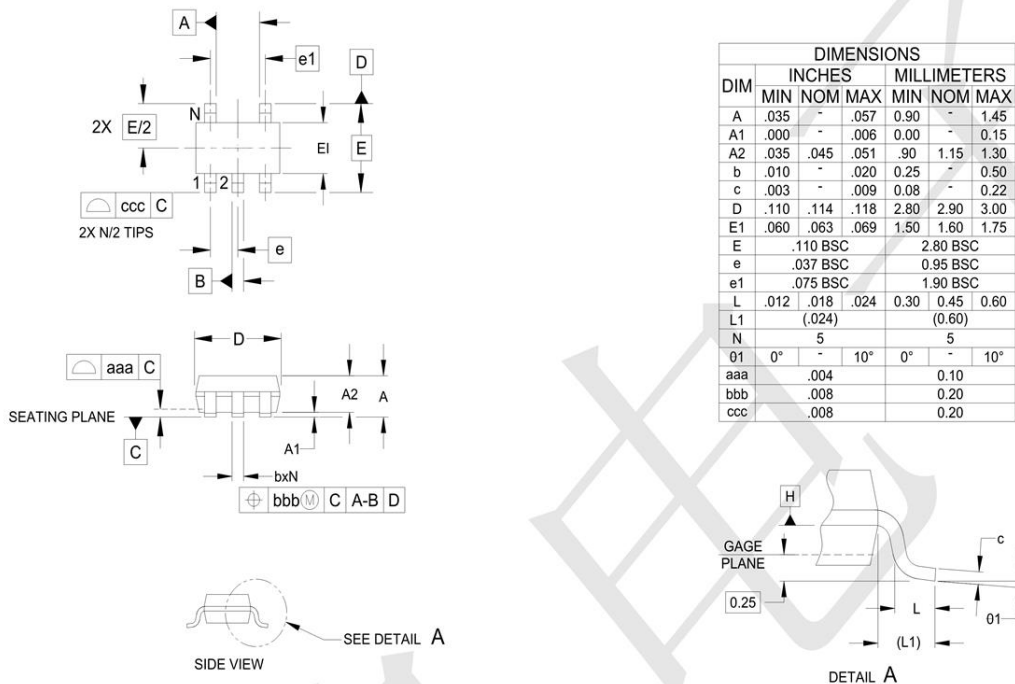


Fig3. Power Derating Curve



SOT23-5 Package Outline Drawing



Suggested Land Pattern

