

Features

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

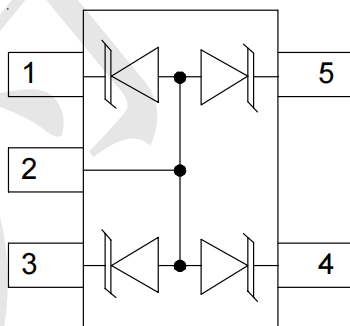
Mechanical Characteristics

- ◆ Package: SOT353(SC70-5)
- ◆ 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/7InchTape & Reel

Applications

- ◆ USB 2.0 and USB 3.0 Ports
- ◆ USB OTG
- ◆ Digital video interface(DVI)
- ◆ Monitor and Flat Panel Displays
- ◆ PCI Express and Serial SATA Ports
- ◆ Gigabit Ethernet
- ◆ IEEE 1394 firewire ports
- ◆ Consumer products (STB, DVD, DSC, DVC...)

Dimensions and Pin Configuration



Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs) (V _{CC} -GND)	P _{pk}	80	W
ESD per IEC61000-4-2 (Air)	V _{ESD}	±20	kV
ESD per IEC61000-4-2 (Contact)		±15	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	
Breakdown Voltage	V _{BR}	6			V	I _T =1mA
Leakage Current	I _{Leak}			100	nA	V _{RWM} =5V
Clamping Voltage	V _C			11	V	I _{PP} =1A, T _p =8/20 μs
Clamping Voltage	V _C			13	V	I _{PP} =2A, T _p =8/20 μs
Junction Capacitance (I/O to GND)	C _J		0.45	0.7	pF	V _R =0V, f=1MHz,
Junction Capacitance (I/O to I/O)	C _J		0.3		pF	V _R =0V, f=1MHz,

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

Fig1. 8/20 μs Pulse Waveform

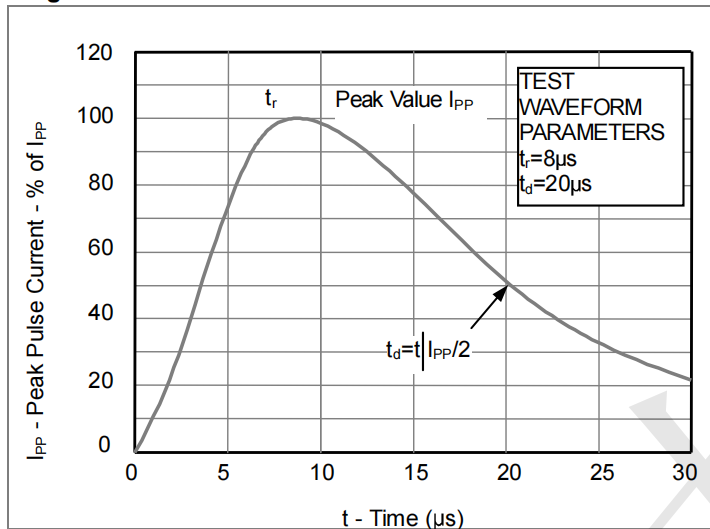


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

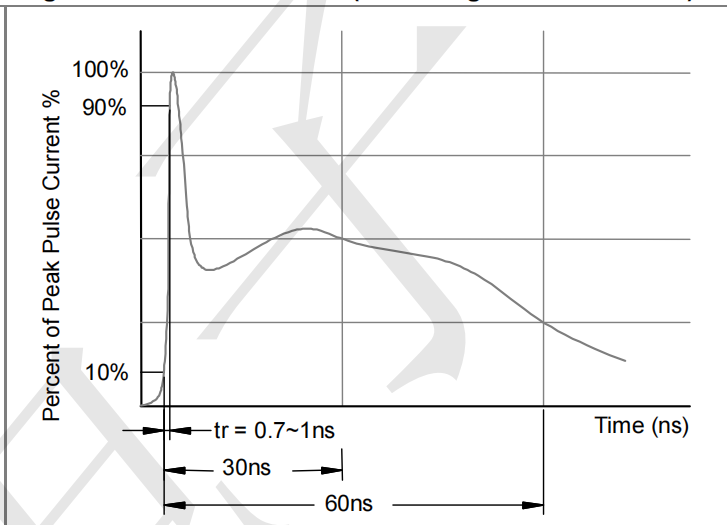
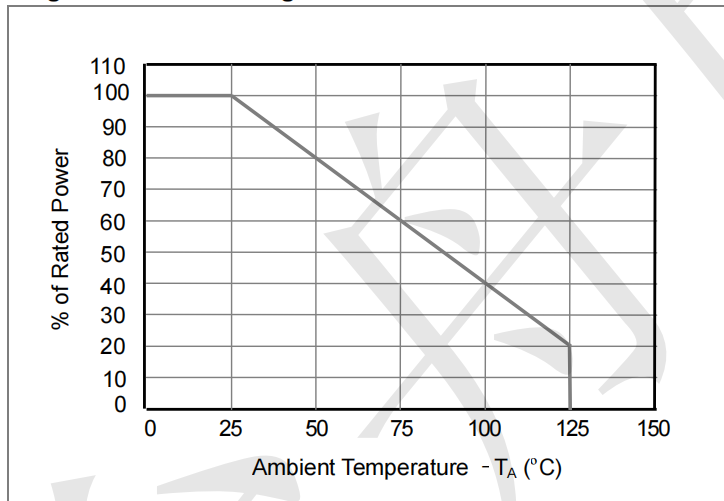
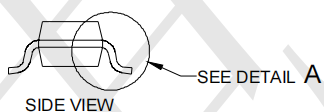
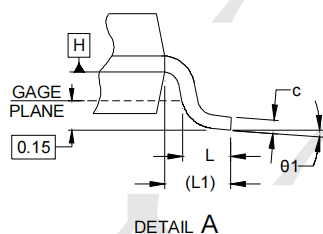
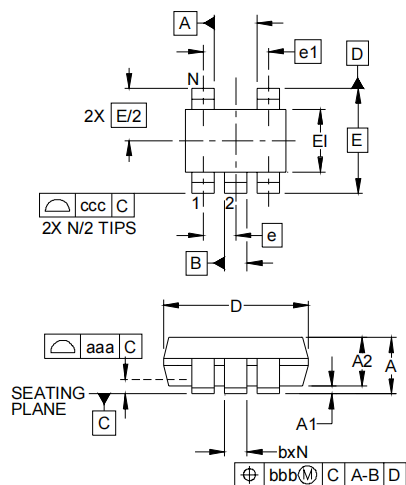


Fig3. Power Derating Curve



Outline Drawing - SOT-353



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	-	-	.043	-	-	1.10
A1	.000	-	.004	0.00	-	0.10
A2	.028	.035	.039	0.70	0.90	1.00
b	.006	-	.012	0.15	-	0.30
c	.003	-	.009	0.08	-	0.22
D	.075	.079	.083	1.90	2.00	2.10
E	.045	.049	.053	1.15	1.25	1.35
e	.083 BSC			2.10 BSC		
e1	.026 BSC			0.65 BSC		
e1	.051			1.30 BSC		
L	.010	.014	.018	0.26	0.36	0.46
L1	(.017)			(0.42)		
N	5			5		
θ1	0°	-	8°	0°	-	8°
aaa	.004			0.10		
bbb	.004			0.10		
ccc	.012			0.30		