

Features

- IEC61000-4-2 ESD 15KV Air,8KV contact compliance
- Small SOT23-6L surface mount package
- Protects three data lines
- Working voltage : 5V
- Low leakage current and low clamping voltage
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature:Pure Tin-Sn,260-270°C
- Flammability rating UL 94V-0

Mechanical Characteristics

- Package: SOT23-6
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Pb-Free, Halogen Free, RoHS/WEEE Compliant



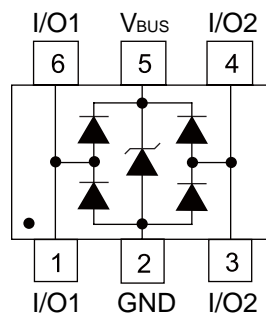
Applications

- USB 2.0 interface
- 10/100 Ethernet
- Personal digital assistants (PDA's)
- Notebooks, Desktops and Servers
- Portable instrumentation
- Digital cameras

Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD0502S6	3000	7"

Dimensions and Pin Configuration



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

Parameter	Symbol	Value	Unit
ESD voltage (HBM contact)	V_{ESD}	± 8	kV
ESD voltage (AIR contact)		± 15	
Lead soldering temperature	T_L	260 (10 sec.)	$^{\circ}\text{C}$
Storage & operating temperature range	T_{STG}, T_J	-55~+150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse stand-off voltage	V_{RWM}				5	V
Reverse breakdown voltage	V_{BR}	$I_{\text{BR}}=1\text{mA}$	6			V
Reverse leakage current	I_{R}	$V_{\text{R}}=5.25\text{V}$ each I/O pin			1	μA
Clamping voltage ($t_p=8/20\mu\text{s}$)	V_{C}	$I_{\text{PP}}=1\text{A}$			12	V
Clamping voltage ($t_p=8/20\mu\text{s}$)	V_{C}	$I_{\text{PP}}=5\text{A}$			17	V
Off state junction capacitance	C_J	0Vdc, $f=1\text{MHz}$ Between I/O pins and GND		3.5		pF

PROTECTION PRODUCTS
Typical characteristics

Fig1. 8/20 μ s Pulse Waveform

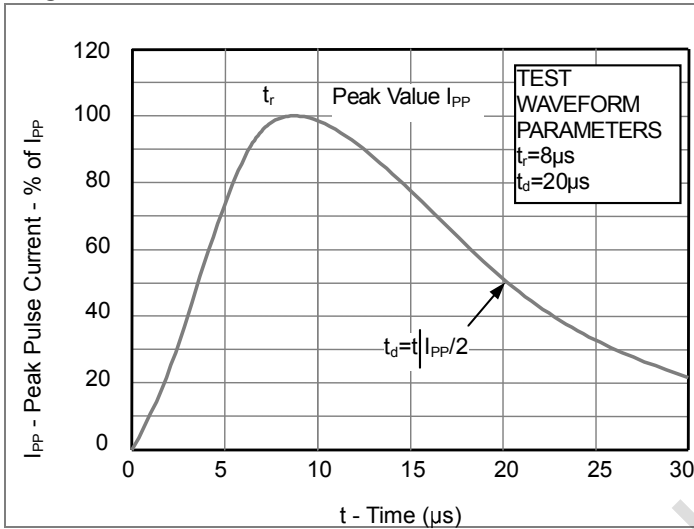


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

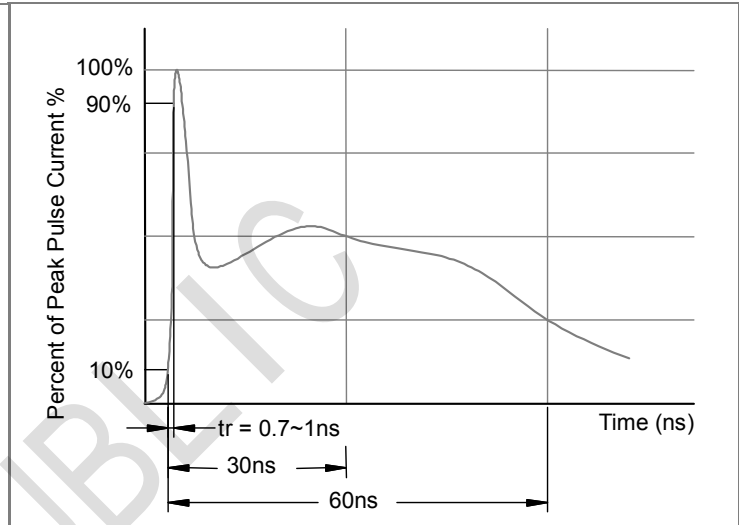
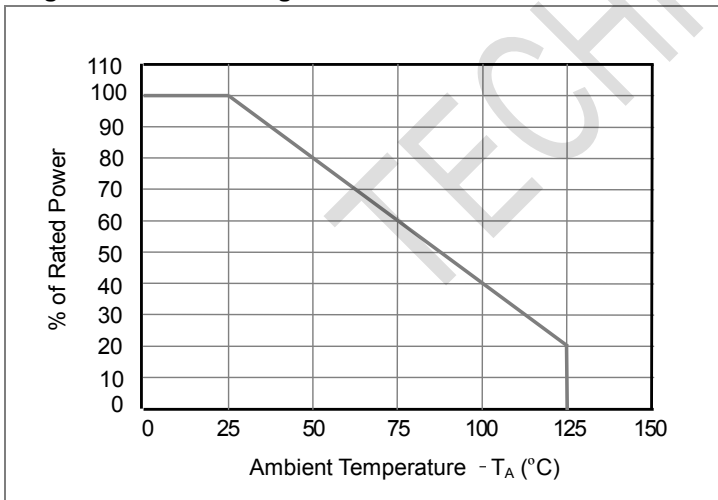
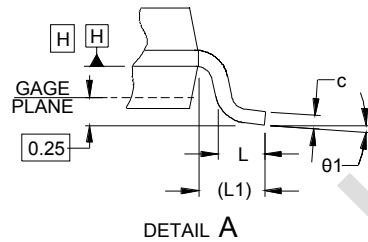
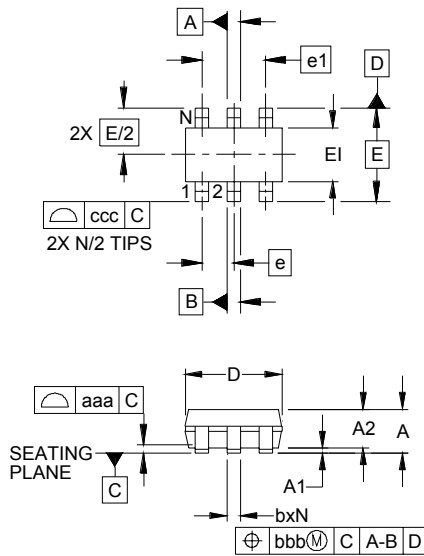


Fig3. Power Derating Curve

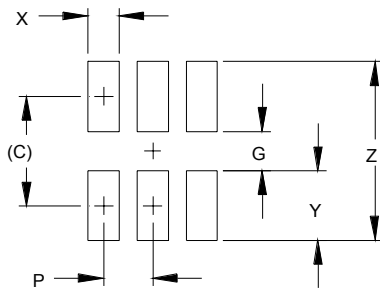


Outline Drawing - SOT23-6



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

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