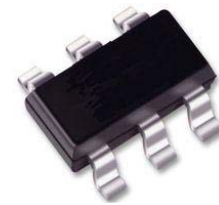


Features

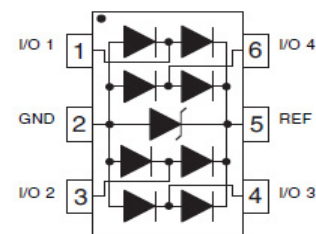
- 150 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- SC70-6L package
- Protects up to four I/O lines & power lines
- Low capacitance for high-speed interfaces
- Low leakage current and clamping voltage
- RoHS compliant
- Transient protection to
 - IEC 61000-4-2(ESD) ± 15 KV(air), ± 8 KV(contact)
 - IEC 61000-4-4 (EFT) 40A (5/50ns)



Package: SC-70-6L

Applications

- USB 2.0
- USB OTG
- Monitors and Flat Panel Displays
- Displays Digital Visual Interface (DVI)
- High-Definition Multimedia Interface (HDMI)
- Gigabit Ethernet
- SIM Ports
- IEEE 1394 Firewire Ports



Schematic Diagram

Description

- SPESLC5VSC70-6U are surge rated diode arrays designed to protect high speed data interfaces. This device has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).
- The unique design incorporates surge rated, low capacitance steering diodes and a TVS diode in a single package. During transient conditions, the steering diodes direct the transient to either the positive side of the power supply line or to ground. The internal TVS diode prevents over-voltage on the power line, protecting any downstream components.
- The low capacitance array configuration allows the user to protect four high-speed data or transmission lines. The low inductance construction minimizes voltage overshoot during high current surges. This device is optimized for ESD protection of portable electronics. They may be used to meet the ESD immunity requirements of IEC 61000-4-2, Level 4 (± 15 kV air, ± 8 kV contact discharge).

Absolute Maximum Ratings

($T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbols	Value	Units
Peak Pulse Power($t_p=8/20\mu s$)	P_{PP}	150	W
Operating Temperature	T_J	-55 to +125	$^\circ C$
Storage temperature	T_{STG}	-50 to +150	$^\circ C$



Electrical Characteristics per line

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

Parameter	Symbols	Conditions	Min	Typ	Max	Units
Reverse stand-off Voltage	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}, T_P=8/20\mu\text{s}$	-	-	15	V
Clamping Voltage	V_C	$I_{PP}=6\text{A}, T_P=8/20\mu\text{s}$	-	-	25	V
Junction Capacitance	C_J	$V_R=1\text{V}, f=1\text{MHz}$ (IO to GND)	-	-	0.6	pF
		$V_R=1\text{V}, f=1\text{MHz}$ (IO to IO)	-	-	0.3	pF

Note: V_{RWM}, V_{BR}, I_R Measured pin5 to pin2
 V_C Measured any pin to pin2

Typical Characteristic Curves

Fig.1 Peak Pulse Power vs Pulse Time

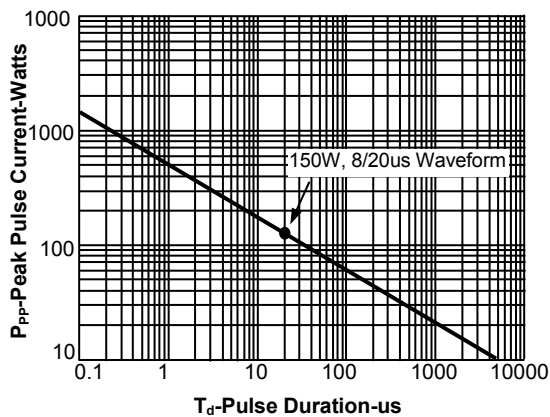


Fig.2 Pulse Wave Form - 8/20 μs

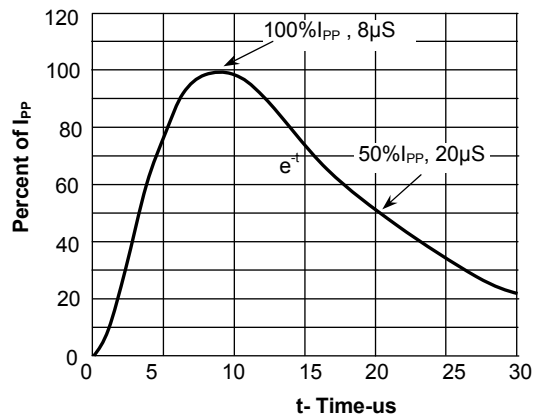


Fig.3 Power Derating Curve

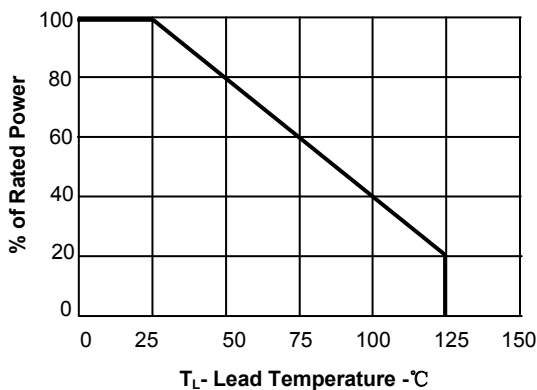
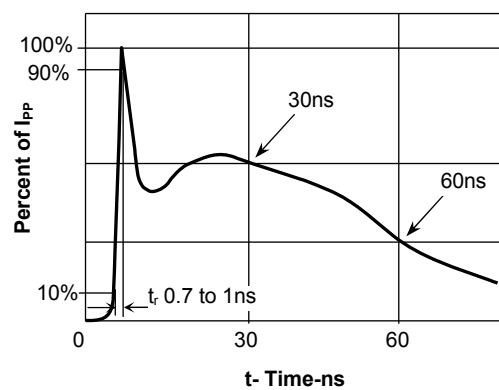
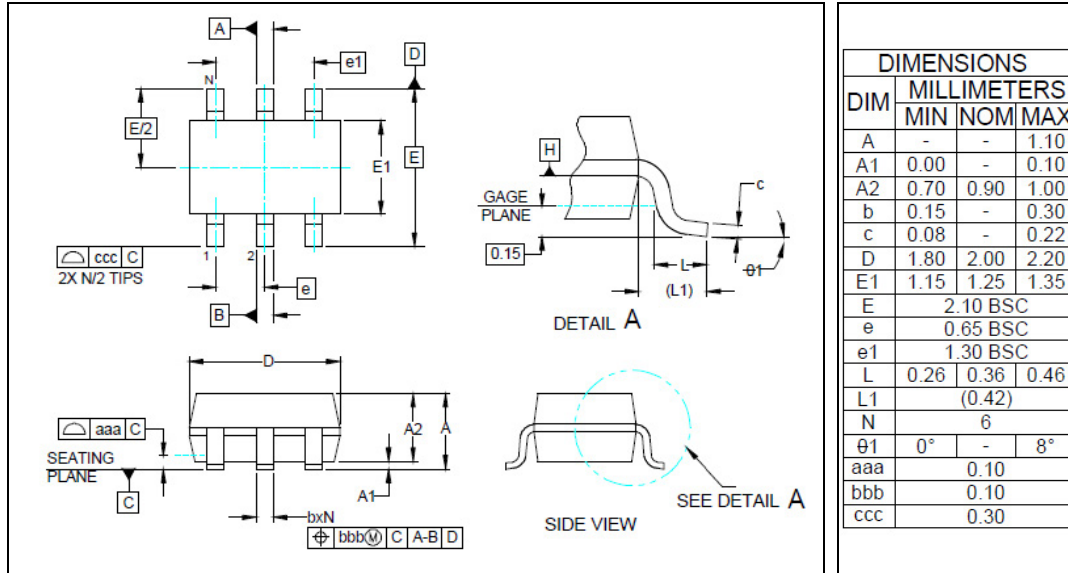


Fig.4 Fig.4 Pulse Waveform-ESD(IEC61000-4-2)





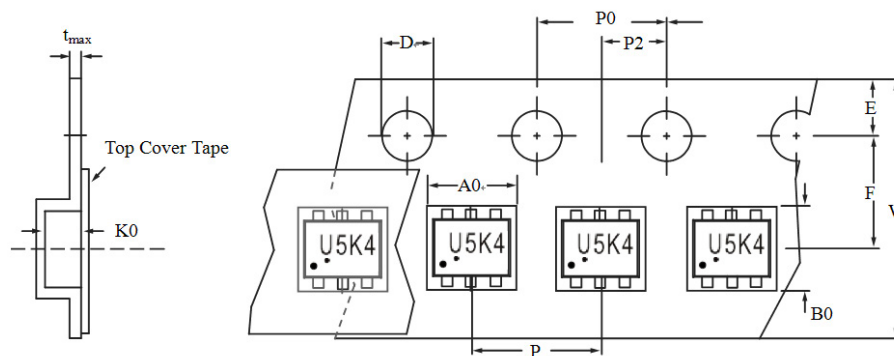
Product Dimensions



NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DATUMS **-A-** AND **-B-** TO BE DETERMINED AT DATUM PLANE **-H-**
3. DIMENSIONS "E1" AND "D" DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
4. REFERENCE JEDEC STD MO-203, VARIATION AB.

Package Information

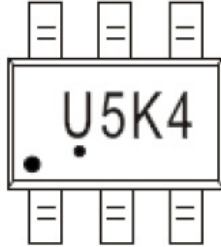


A0	B0	K0	D	E	F	W	P0	P2	P	tmax
2.25±0.05	2.55± 0.05	1.20±0.05	1.50±0.10	1.75±0.10	3.50±0.05	8.00±0.30	4.00± 0.10	2.00± 0.05	4.00± 0.10	0.4

NOTES: (1) Dimensions are in millimeters



Marking



Order Information

Device	Package	Net Weight	Carrier	Quantity	HSF Status
SPESLC5VSC70-6U	SC70-6L	0.0065g	Tape & Reel	3000pcs	RoHS compliant