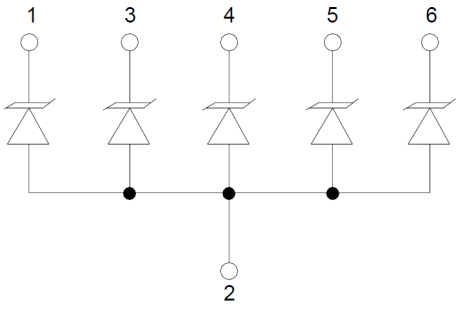
Description

The AU0505S6L is a TVS array, utilizing leading monolithic silicon technology to provide fast response time and ultra low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive portable electronics. The AU0505S6L complies with the IEC 61000-4-2 (ESD) with ±16kV air and ±16kV contact discharge. It is assembled into a 6-lead SOT-563 lead-free package. The leads are finished with lead-free matte tin. Each device will protect up to 5 lines.

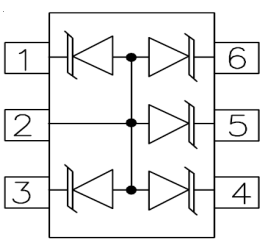
Features

- Protects up to 5 lines
- Low leakage: nA level
- Low clamping voltage
- Excellent surge protection (25W at 8/20μs)
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±16kV
    - Contact discharge: ±16kV
  - IEC61000-4-5 (Lightning) 1.8A (8/20μs)
- RoHS Compliant

Dimensions and Pin Configuration



Circuit Schematic



Pin Schematic

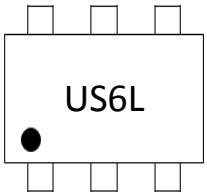
Mechanical Characteristics

- Package: SOT-563
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

- Audio Players
- Peripherals
- Printers
- Desktops PC , Laptops and Servers
- Microprocessor Based Equipment
- Cell Phone Handsets and Accessories
- Set Top Box

Marking Information



US6L= Device Marking Code
Dot denotes pin1

Ordering Information

Part Number	Packaging	Reel Size
AU0505S6L	3,000/Tape & Reel	7 inch

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

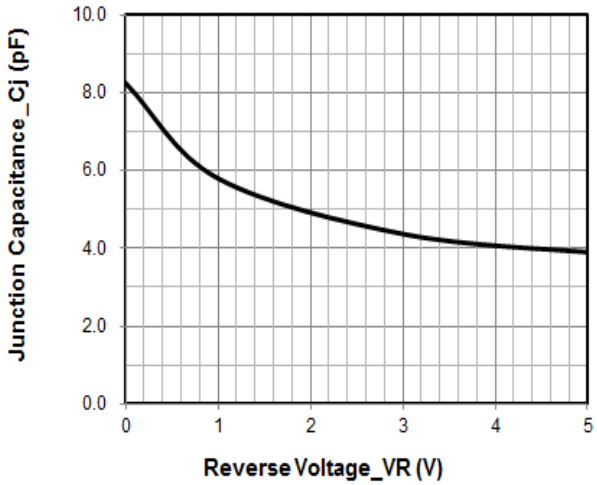
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	25	W
Peak Pulse Current (8/20μs)	I_{PP}	1.8	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±16 ±16	kV
Operating Temperature Range	T_J	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

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

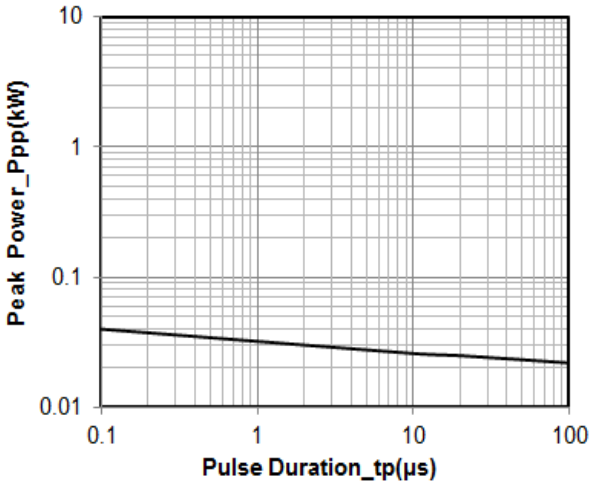
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	
Breakdown Voltage	V_{BR}	6		8.5	V	I_T = 1mA
Reverse Leakage Current	I_R			0.2	μA	V_{RWM} = 5V
Clamping Voltage	V_C			10	V	I_{PP} = 1A
Clamping Voltage	V_C			12	V	I_{PP} = 1.8A
Junction Capacitance	C_J		8.3		pF	VR = 0V, f = 1MHz

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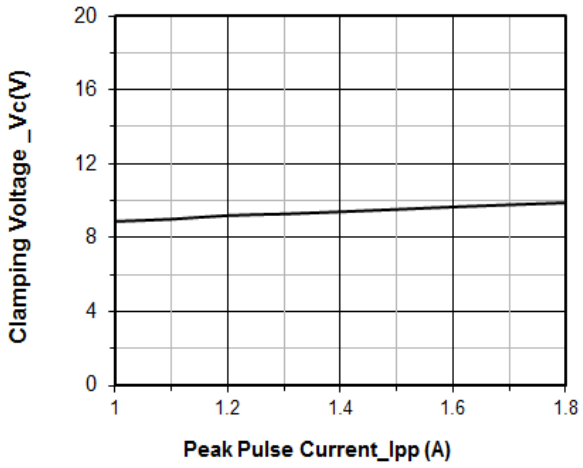
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



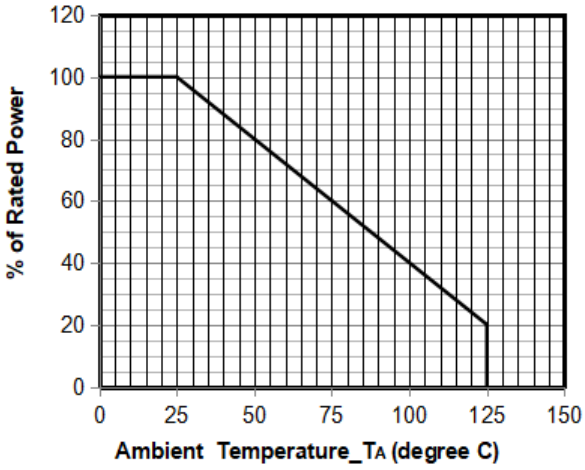
Junction Capacitance vs. Reverse Voltage



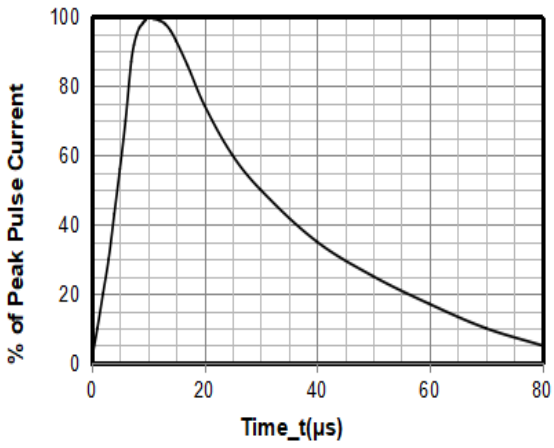
Peak Pulse Power vs. Pulse Time



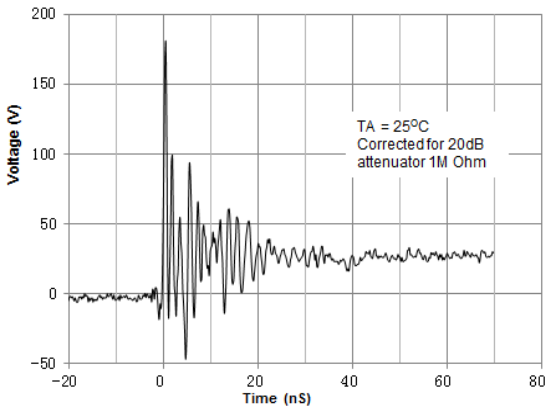
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform

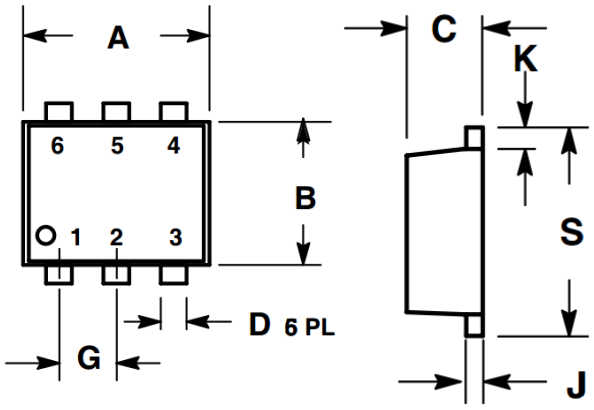


ESD Clamping Voltage

8 kV Contact per IEC61000−4−2

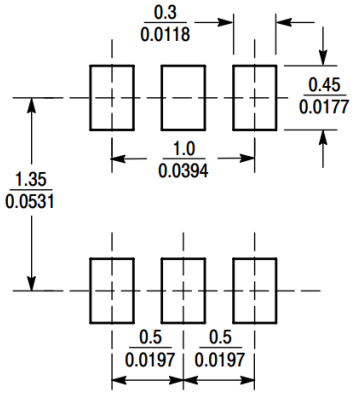
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SOT-563 Package Outline Drawing



SYM	DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.50	1.70	0.059	0.067
B	1.10	1.30	0.043	0.051
C	0.50	0.60	0.020	0.024
D	0.17	0.27	0.007	0.011
G	0.50 BSC		0.020 BSC	
J	0.08	0.18	0.003	0.007
K	0.10	0.30	0.004	0.012
S	1.50	1.70	0.059	0.067

Suggested Land Pattern



Unit: (mm)

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