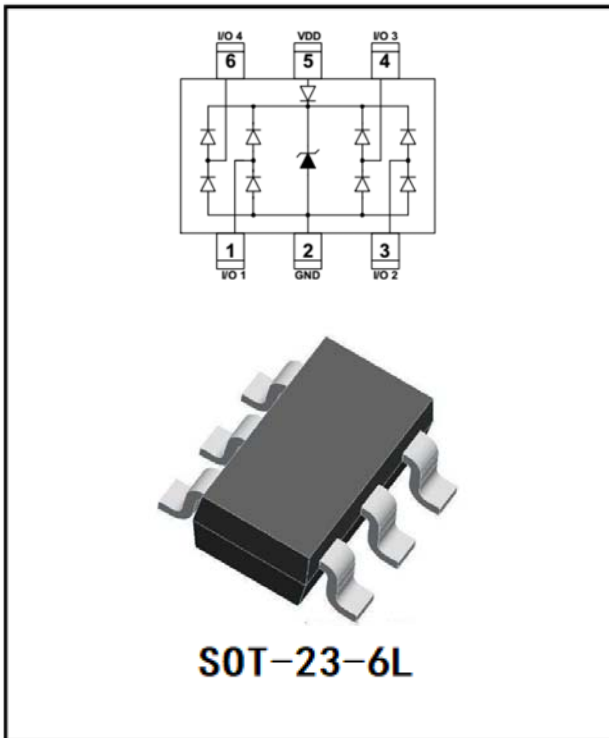


## Low Capacitance TVS Diode Array

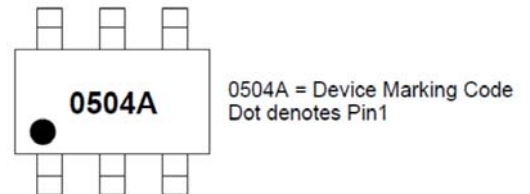


### Features

- Ultra low capacitance: 0.3Pf typical
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Up to four data lines and one power line protects
- RoHS Compliant

### Mechanical Characteristics

- Package: SOT-23 6L
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Marking Information: See Below



### ■ Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±25	KV
ESD per IEC 61000-4-2 (Contact)		±20	KV
Peak Pulse Power(8/20μs)	P <sub>PK</sub>	75	W
Peak Pulse Current(8/20μs)	I <sub>PP</sub>	5	A



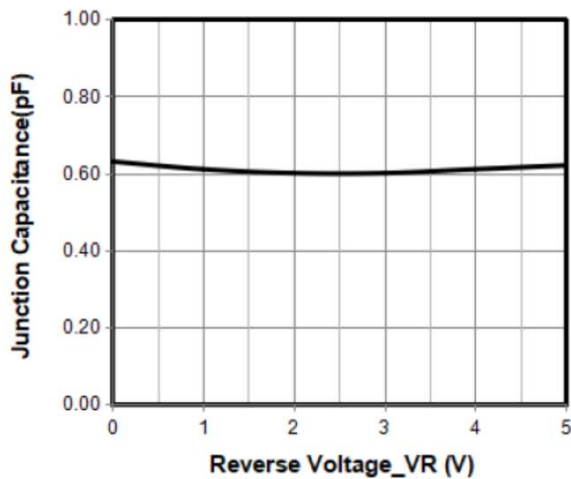
# ESDSL0504S2

## ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

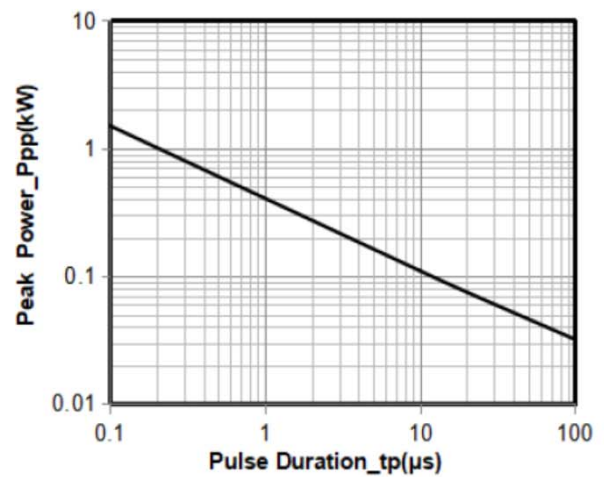
PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Working Voltage	$V_{RWM}$	V	Any I/O pin to ground			5
Reverse Leakage Current	$I_R$	$\mu A$	$V_{RWM}=5V$ , any I/O pin to ground			0.5
Breakdown Voltage	$V_{(BR)}$	V	$I_T=1mA$ , any I/O pin to ground	6		
Forward Voltage	$V_F$	V	$I_F = 15mA$			1.2
Clamping Voltage	$V_C$	V	$I_{PP} = 1A$ (8/20 $\mu s$ pulse), any I/O pin to ground			10
Clamping Voltage	$V_C$	V	$I_{PP} = 5A$ (8/20 $\mu s$ pulse), any I/O pin to ground			15
Junction Capacitance	$C_J$	pF	$V_R = 0V$ , $f = 1MHz$ , between I/O pins		0.3	0.4
Junction Capacitance	$C_J$	pF	$V_R = 0V$ , $f = 1MHz$ , any I/O pin to ground			0.8

Note 1: I/O pins are Pin 1, 3, 4 and 6

## ■Typical Performance Characteristics (Ta=25°C unless otherwise Specified)



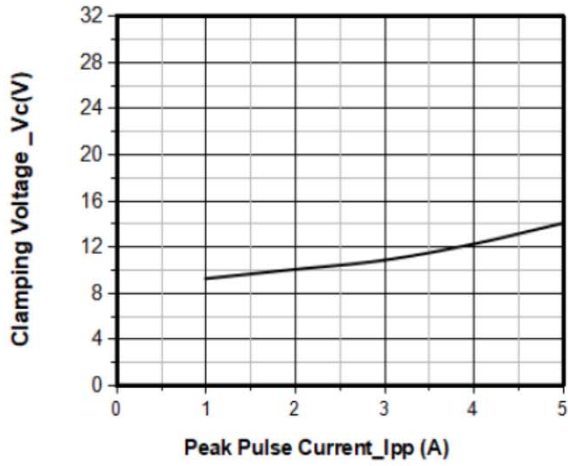
Junction Capacitance vs. Reverse Voltage



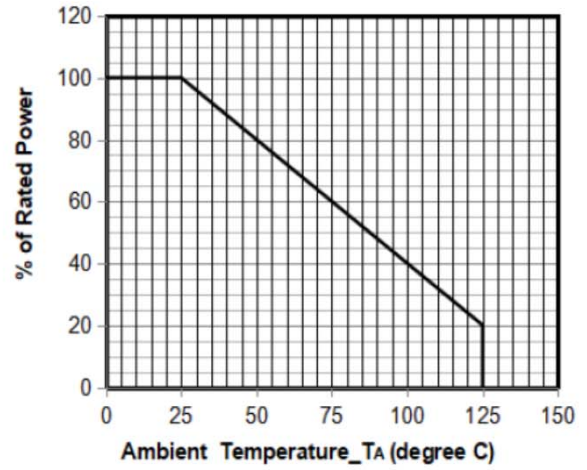
Peak Pulse Power vs. Pulse Time



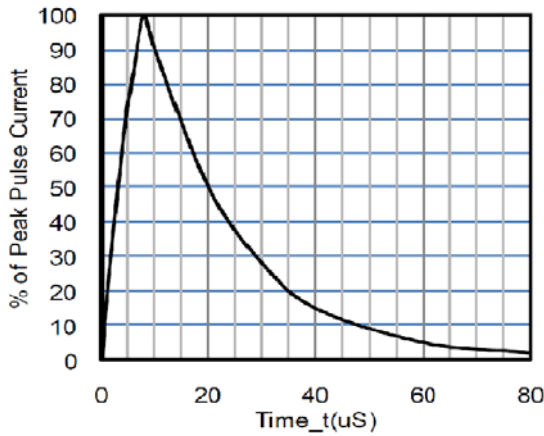
# ESDSL0504S2



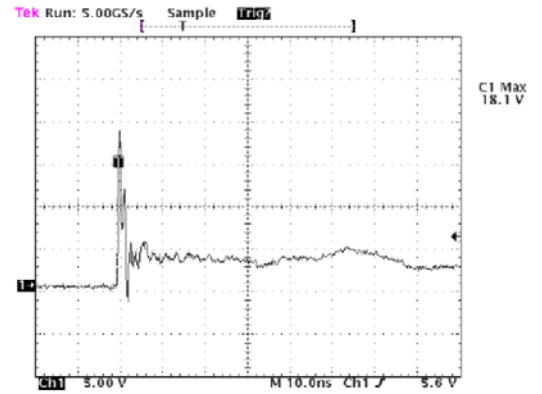
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8/20μs waveform per IEC61000-4-5

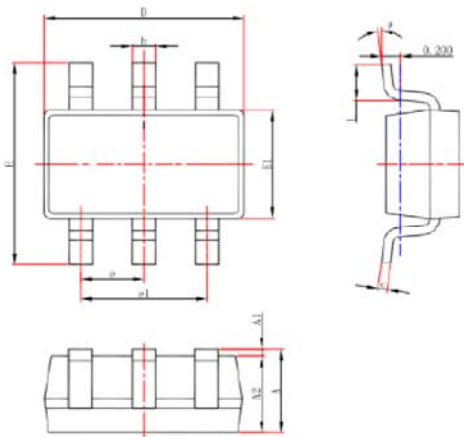


Note: Data is taken with a 10x attenuator

ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

## ■SOT-23 6L Package Outline Drawing

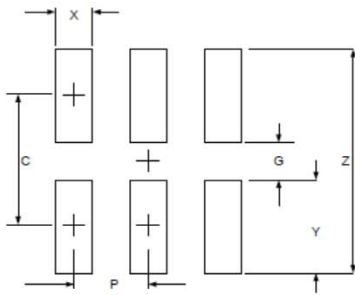


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°



## ESDSL0504S2

### ■ Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	2.50	0.098
G	1.40	0.055
P	0.95	0.037
X	0.60	0.024
Y	1.10	0.043
Z	3.60	0.141



## ESDSL0504S2

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