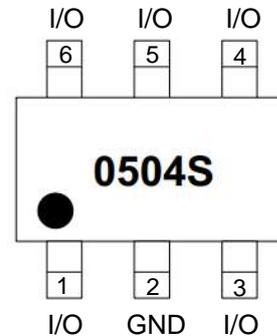


Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 25\text{kV}$
 - Contact discharge: $\pm 20\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant

Dimensions SOT-363



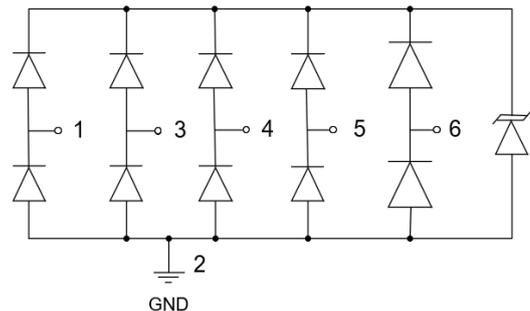
Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100/1000M Ethernet

Mechanical Characteristics

- Package: SOT-363
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000pcs
- Reel Size: 7inch
- Device Marking: 0504S

Pin Configuration



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

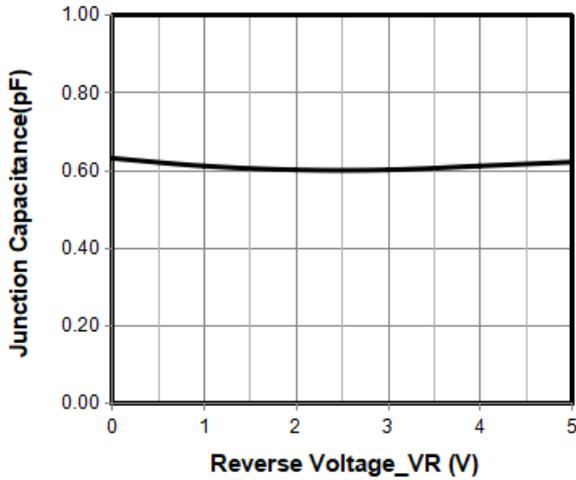
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	100	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 20	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STJ}	-55 to +150	°C

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

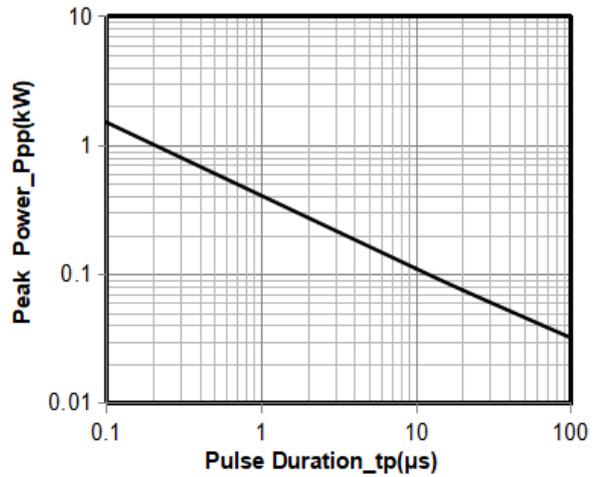
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$			0.5	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse) I/O to GND			10	V
Clamping Voltage	V_C	$I_{PP} = 5\text{A}$ (8 x 20 μs pulse) I/O to GND			15	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$ I/O to I/O		0.3	0.4	pF
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$ I/O to GND			0.8	pF

Note 1: I/O pins are Pin 1, 3, 4, 5 and 6

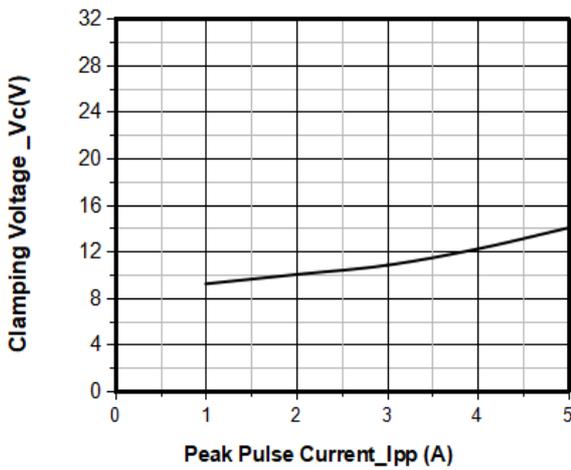
Typical Performance Characteristics (TA=25°C unless otherwise specified)



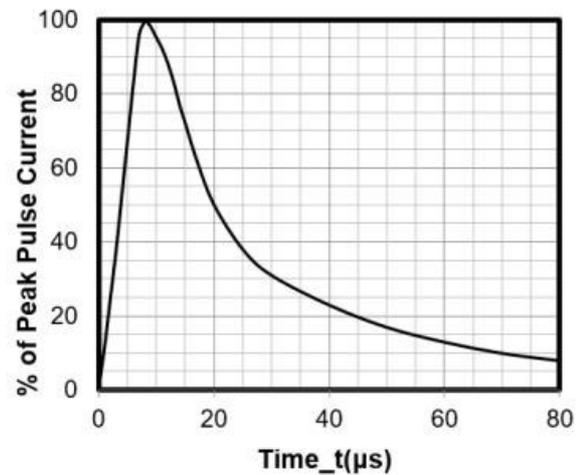
Junction Capacitance vs. Reverse Voltage



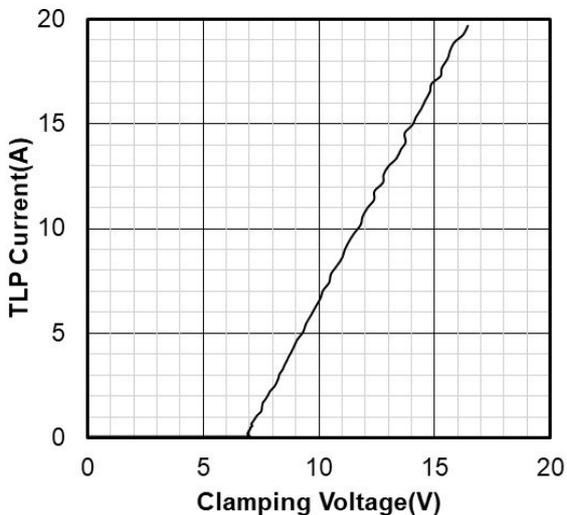
Peak Pulse Power vs. Pulse Time



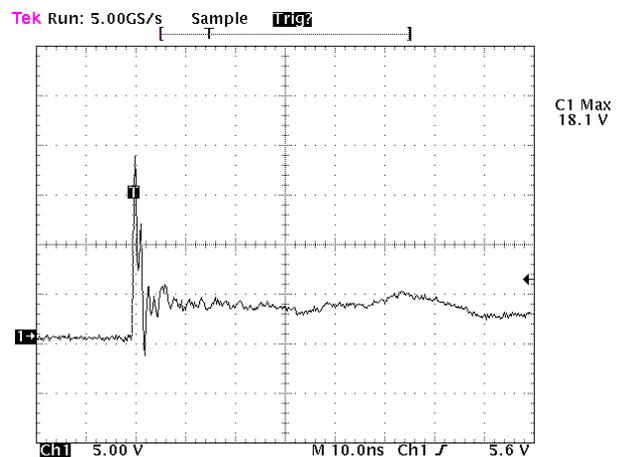
Clamping Voltage vs. Peak Pulse Current



8 X 20μs Pulse Waveform



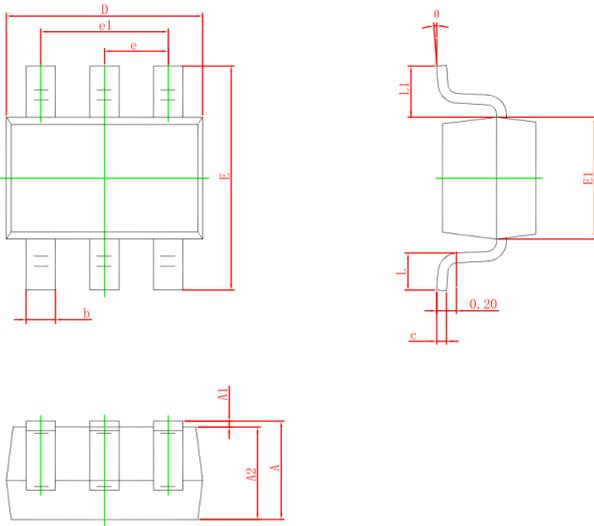
TLP Measurement



Note: Data is taken with a 10x attenuator

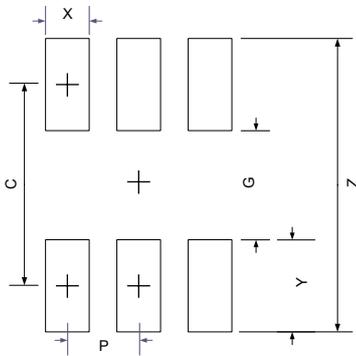
ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

SOT-363 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.900	-	1.100	0.035	-	0.043
A1	0.000	-	0.100	0.000	-	0.004
A2	0.900	-	1.000	0.035	-	0.039
b	0.150	-	0.350	0.006	-	0.014
c	0.080	-	0.150	0.003	-	0.006
D	2.000	-	2.200	0.079	-	0.087
E	2.150	-	2.450	0.085	-	0.096
E1	1.150	-	1.350	0.045	-	0.053
e	0.650 TYP.			0.026 TYP.		
e1	1.200	-	1.400	0.047	-	0.055
L	0.260	-	0.460	0.010	-	0.018
L1	0.525 REF.			0.021 REF.		
θ	0°	-	8°	0°	-	8°

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	1.85	0.073
G	1.00	0.039
P	0.65	0.026
X	0.40	0.016
Y	0.85	0.033
Z	2.70	0.106

NOTICE

Leiditech reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Leiditech does not assume any liability arising out of the application or use of any product described herein.