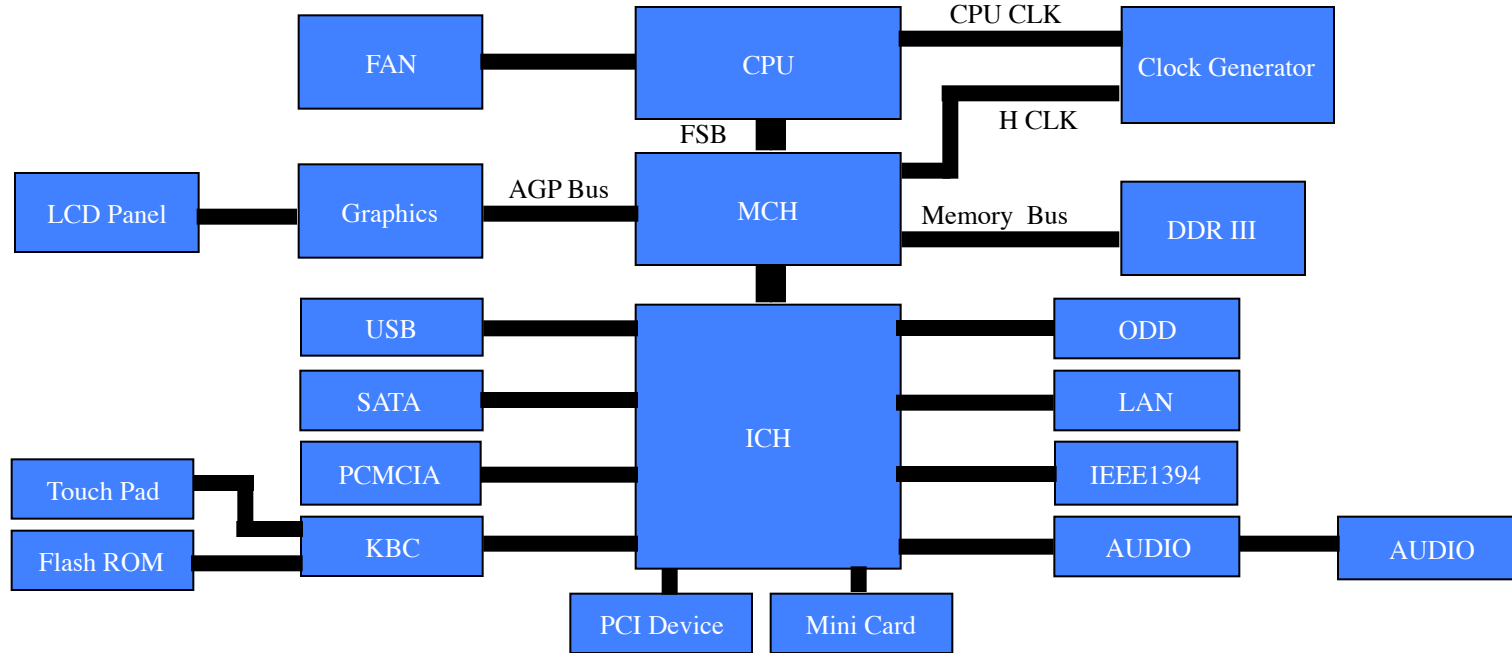


Lite-On Semiconductor Note Book Platform Solutions

Note Book Block Diagram

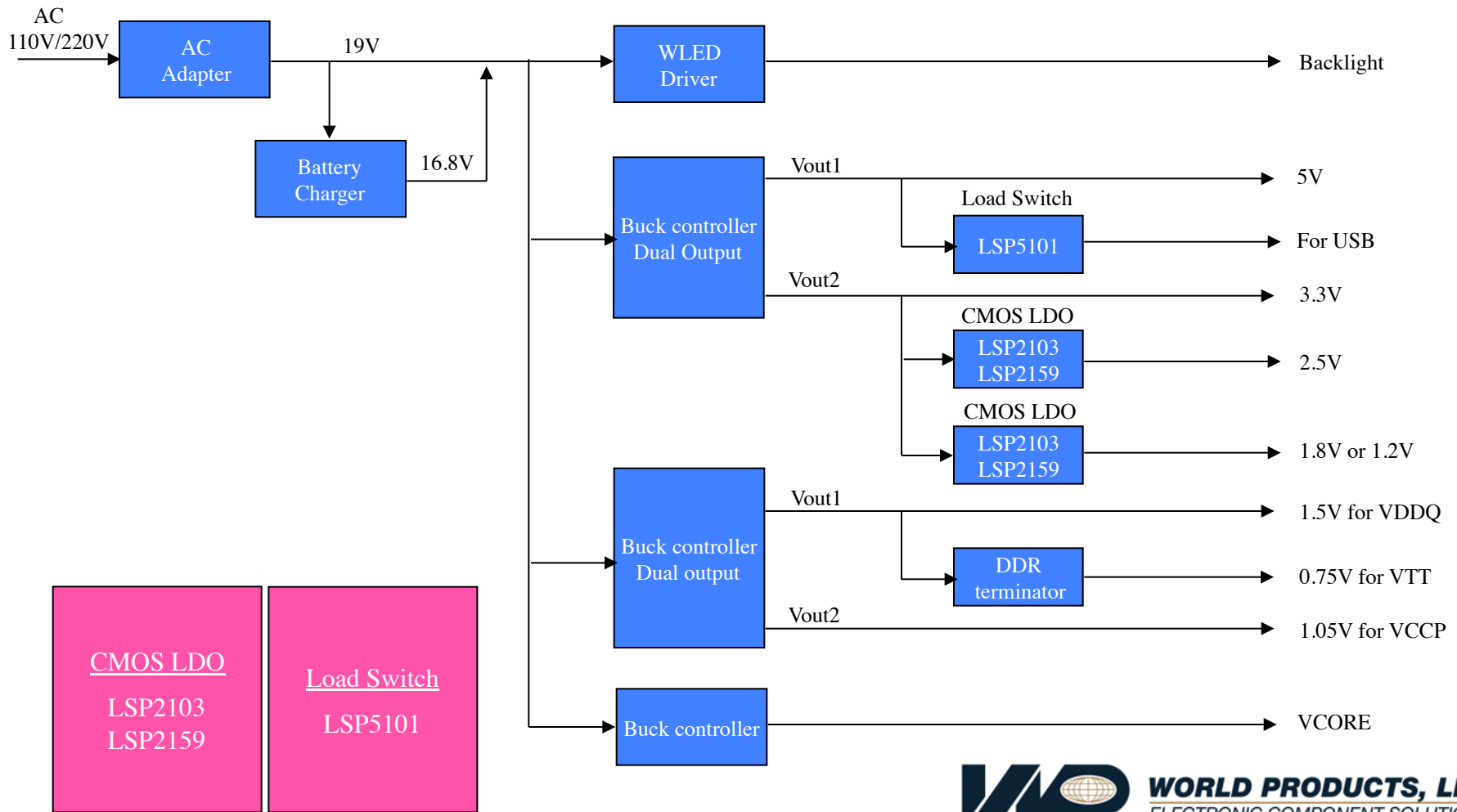


<u>ESD</u>
L02ESD5V0D6-5
L02ESD5V0F6-5
L13ESD5V0CA2
L26ESD5V0A2
L30ESD24V0C3-2
L30ESDL5V0C3-2

<u>ESD</u>
L30ESD5V0C3-2
L30ESDL5V0C6-4
L15ESDL5V0NA-4
L15ESD5V0C6-4
L35ESD5V0CB2

<u>DPM</u>
CMOS LDO
LSP2103
LSP2159
Load Switch
LSP5101

Note Book DC to DC Block Diagram



LSC Product Selection Guide

Surface Mount ESD Protection Device

Part Number	Peak Power Dissipation 8x20 s	Reverse standoff voltage	Max Reverse Leakage @ VR	Max Clamping Voltage @8x20 s	Peak Pulse Current 8x20 s	Off-State Capacitance 1MHz Zero DC Bias	Package
		VR	IR	Vc	Ipp	Co	
	W	V	uA	V	A	pF	
L02ESD5V0D6-5	25	5	0.025	12	2.5	19	SOT-363
L02ESD5V0F6-5	25	5	0.025	12	2.5	19	SOT-563
L13ESD5V0CA2	130	5	0.1	14	12	45	SOD-523
L26ESD5V0A2	260	5	1	17	15	140	SOD-523
L30ESD24V0C3-2	300	24	1	43	4	60	SOT-23
L30ESDL5V0C3-2	340	5	5	20	17	1.2	SOT-23
L30ESD5V0C3-2	300	5	1	20	15	160	SOT-23
L30ESDL5V0C6-4	300	5	5	17.5	5	1.5 (typ)	SOT-23-6L
L15ESDL5V0NA-4	150	5	1	15	1	0.8	SLP2510P8
L15ESDL5V0C6-4	150	5	1	15	1	0.8	SOT-23-6L
L35ESD5V0CB2	350	5	10	14.5	24	200	SOD-323

LSC Product Selection Guide

DPM CMOS LDO

Part No.	Features	Input Voltage	Output Voltage	Output Current	PSRR	Accuracy	I _Q	Dropout Voltage	Package
LSP2103	a,b,c	5.5V	1.5V/1.8V/2.5V/2.8V/3.3V	1A	60dB	±2%	35uA	300mV at 300mA	SOT223-3L, TO252-3L
LSP2159	a,b,c	5.5V	1.5V/1.8V/2.5V/2.8V/2.85V/3.0V/3.3V/5.0V	1.5A	65dB	±2%	90uA	600mV at 1.5A	SOT223-3L, TO252-3L, TO263-3L

a: Current Limit; b: Thermal Shutdown; c: Low Quiescent current; d: Enable/shutdown control; e: Power good; f: Low noise bypass; g: Dual output

DPM Load Switch

Part No.	Type	Input Voltage	I _Q	Current Limit	Turn On/Off Time	RDS,ON	Package
LSP5101	ADJ	2.7V ~ 5.5V	15uA	1.25A	200uS/2uS	160m	SOT23 -5L

a: Pre-Charge current; b: Soft start; c: Under voltage lock out; d: Thermal protection

L02ESD5V0D6-5

19pF 5CH ARRAY in SOT363

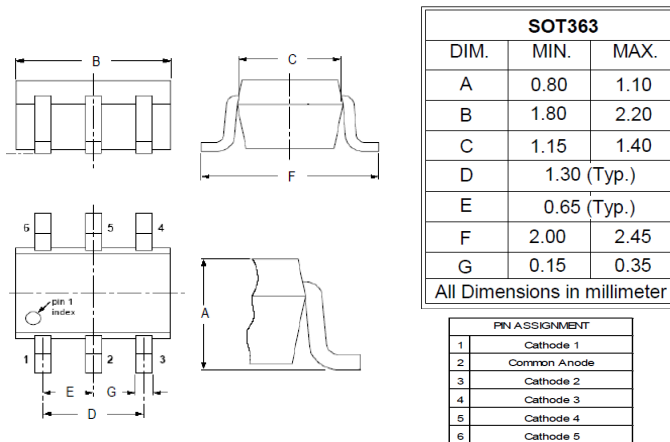
Features

- | Uni-directional ESD Protection of up to Five Lines
- | Bi-directional ESD Protection of up to Four Lines
- | Max. Peak Pulse Power is 25W @ 8/20us
- | Low Capacitance device
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, > ±8KV by Contact

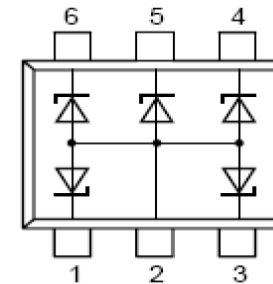
Applications

- | Computers & Peripherals
- | Communication System
- | Audio & Video Equipment
- | Portable Electronics
- | Cellular handsets & Accessories

Package & Dimension



Layout



L02ESD5V0F6-5

19pF 5CH ARRAY in SOT563

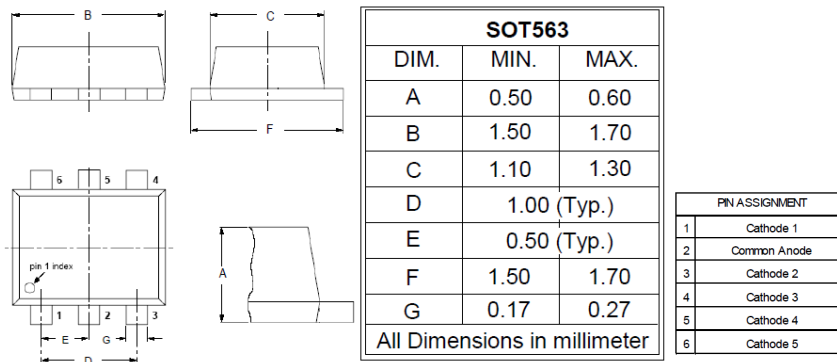
Features

- | Uni-directional ESD Protection of up to Five Lines
- | Bi-directional ESD Protection of up to Four Lines
- | Max. Peak Pulse Power is 25W @ 8/20us
- | Low Capacitance device
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, > ±8KV by Contact

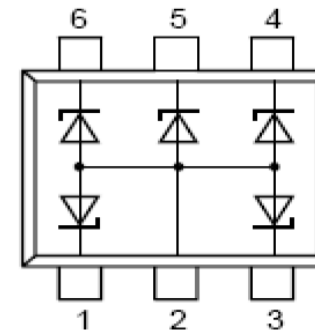
Applications

- | Computers & Peripherals
- | Communication System
- | Audio & Video Equipment
- | Portable Electronics
- | Cellular handsets & Accessories

Package & Dimension



Layout



L13ESD5V0CA2

130W Bidirectional in SOD523

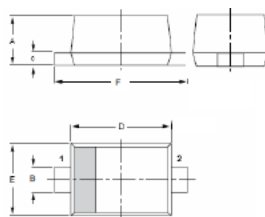
Features

- | Bidirectional ESD Protection of Single Line
- | Max. Peak Pulse Power is 130Watts @ 8/20us
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact
- | IEC 61000-4-5, Level 1 (Surge), Ipp=12A @ 8/20us

Applications

- | Computers and Peripherals
- | Communication System
- | Portable Electronics
- | Notebook, Desktops and Servers
- | Audio & Video Equipment

Package & Dimension

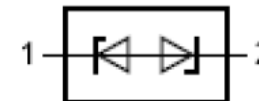


PIN ASSIGNMENT	
1	Cathode
2	Cathode

SOD523		
DIM.	MIN.	MAX.
A	0.58	0.65
B	0.26	0.34
C	0.11	0.17
D	1.15	1.25
E	0.75	0.85
F	1.55	1.65

All Dimensions in millimeter

Layout



L26ESD5V0A2

260W 5V Directional in SOD523

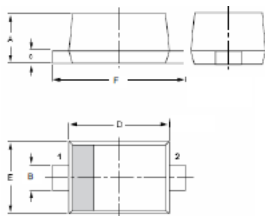
Features

- | Protection of Single Line
- | Max. Peak Pulse Power is 260Watts @ 8/20us
- | Low Clamping Voltage is 17V
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact
- | IEC 61000-4-5 (Surge), IPP=15A @8/20us

Applications

- | Computers and Peripherals
- | Communication System
- | Data Line
- | Audio & Video Equipment

Package & Dimension



SOD523		
DIM.	MIN.	MAX.
A	0.58	0.65
B	0.26	0.34
C	0.11	0.17
D	1.15	1.25
E	0.75	0.85
F	1.55	1.65

All Dimensions in millimeter

PIN ASSIGNMENT	
1	Cathode
2	anode

Layout



L30ESD24VC3-2

300W 24V 2CH Protection in SOT23

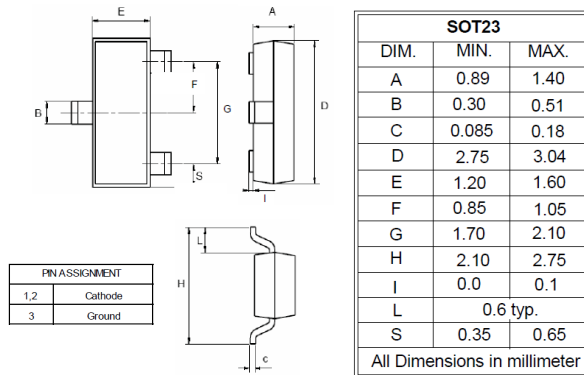
Features

- | Unidirectional ESD Protection of Two Lines
- | Max. Peak Pulse Power is 300Watts @ 8/20us
- | ESD protection skill >25KV
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

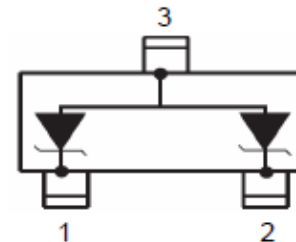
Applications

- | Computers and Peripherals
- | Communication System
- | 10/100/1000 Ethernet
- | Local Area Network (LAN) Equipment
- | High Speed Interface
- | 100% Tin Matte Finish (Lead-Free Product)

Package & Dimension



Layout



L30ESDL5V0C3-2

1.2pF 2CH Protection in SOT23

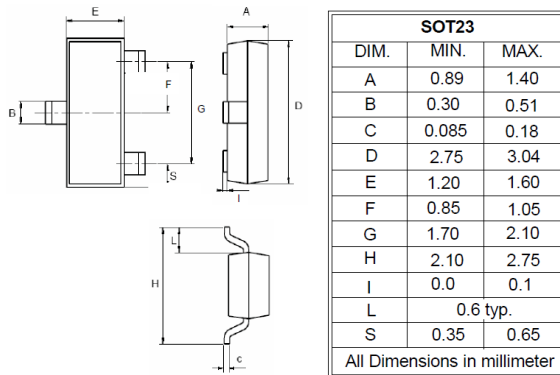
Features

- | Unidirectional ESD Protection of Two Lines
- | Max. Peak Pulse Power is 340Watts @ 8/20us
- | ESD protection skill > 23KV
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), > ±15KV by Air, > ±8KV by Contact
- | IEC 61000-4-5, Level 1 (Surge), I_{pp}=17A @ 8/20us

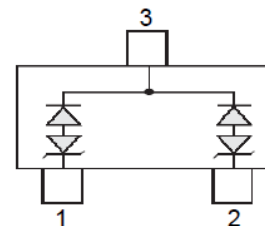
Applications

- | Computers and Peripherals
- | Communication System
- | 10/100/1000 Ethernet
- | Local Area Network (LAN) Equipment
- | High Speed Interface
- | 100% Tin Matte Finish (Lead-Free Product)

Package & Dimension



Layout



L30ESD5V0C3-2

300W 5V 2CH Protection in SOT23

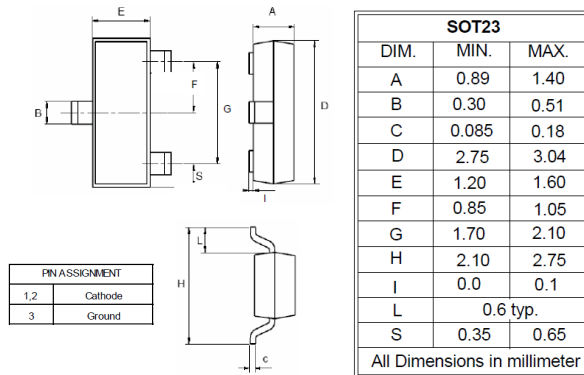
Features

- | Unidirectional ESD Protection of Two Lines
- | Max. Peak Pulse Power is 300Watts @ 8/20us
- | ESD protection skill >25KV
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

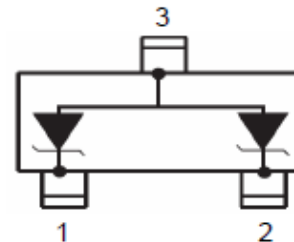
Applications

- | Computers and Peripherals
- | Communication System
- | 10/100/1000 Ethernet
- | Local Area Network (LAN) Equipment
- | High Speed Interface
- | 100% Tin Matte Finish (Lead-Free Product)

Package & Dimension



Layout



L30ESDL5V0C6-4

4CH Level 1 Surge Protection

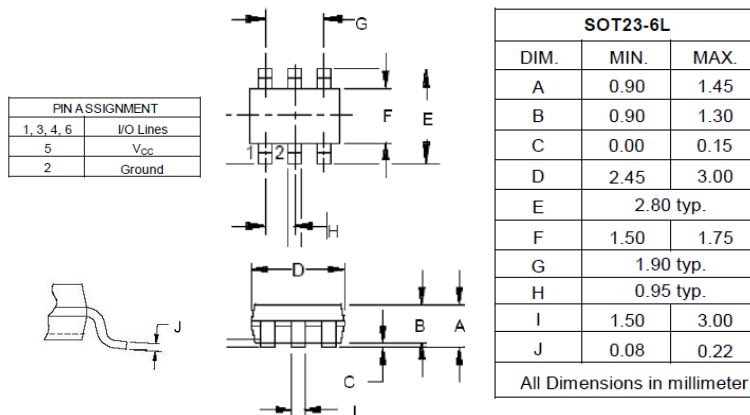
Features

- | Protects Up to Four I/O Line & Power Line
- | Low Capacitance : 0.3pF typical (I/O to I/O)
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

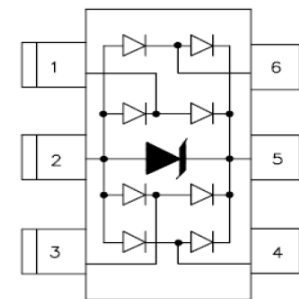
Applications

- | HDMI
- | DVI
- | USB2.0/3.0
- | USB OTG
- | IEEE 1394 Firewire Port
- | D-SUB

Package & Dimension



Layout



Top view

L15ESDL5V0NA-4

0.4pF 4CH ARRAY in SLP2510

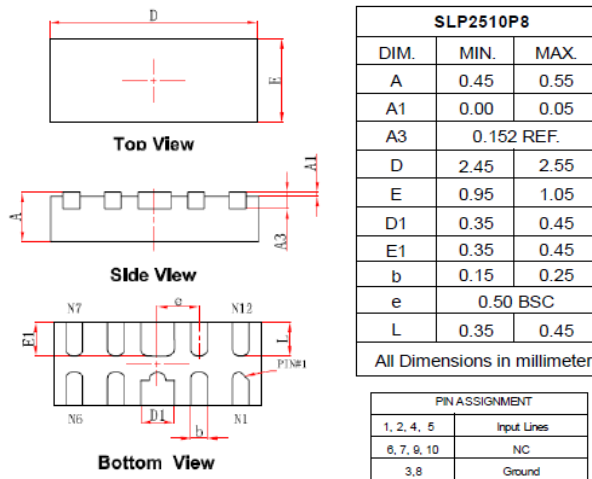
Features

- | Flow Through design
- | Protects four I/O Lines
- | Low Capacitance : 0.3pF typical (I/O to I/O)
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, > ±8KV by Contact

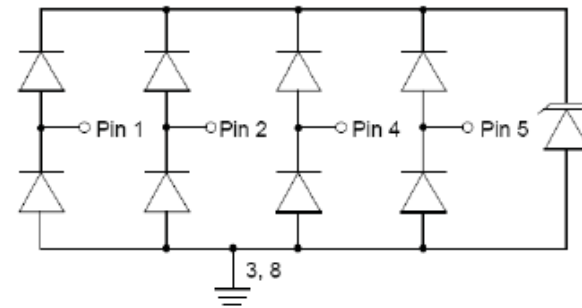
Applications

- | HDMI/DP
- | DVI
- | USB 3.0
- | MDDI Ports
- | Serial ATA
- | PCI Express

Package & Dimension



Layout



4 lines Protection

L15ESDL5V0C6-4

0.4pF 4CH ARRAY in SOT23-6

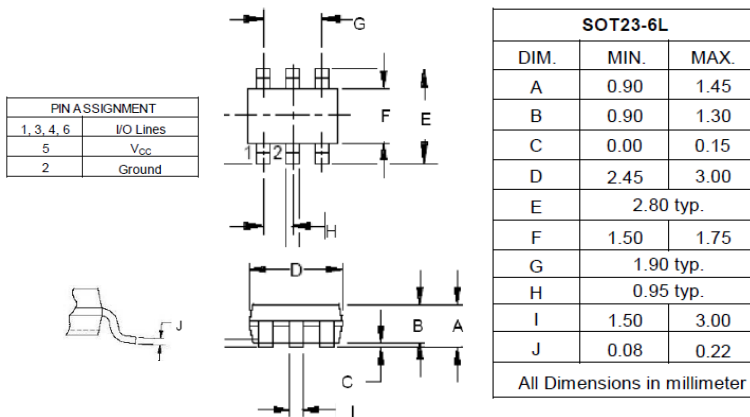
Features

- | Protects Up to Four I/O Line & Power Line
- | Low Capacitance : 0.3pF typical (I/O to I/O)
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

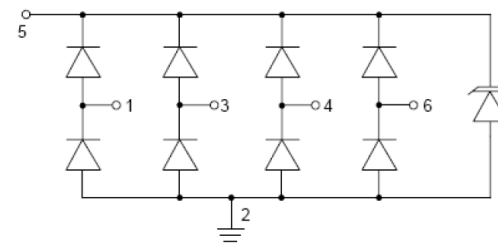
Applications

- | HDMI
- | DVI
- | USB2.0/3.0
- | USB OTG
- | IEEE 1394 Firewire Port
- | D-SUB

Package & Dimension



Layout



4 lines Protection

L35ESD5V0CB2

350W Bidirectional in SOD323

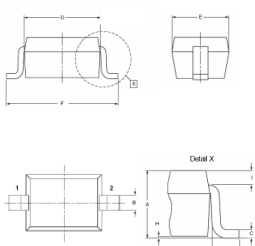
Features

- | Bidirectional ESD Protection of Single Line
- | Max. Peak Pulse Power is 350Watts @ 8/20us
- | Low Clamping Voltage
- | IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact
- | IEC 61000-4-5, Level 2 (Surge), IPP=24A @ 8/20us

Applications

- | Computers and Peripherals
- | Communication System
- | Portable Electronics
- | Cellular handsets and Accessories
- | Notebook, Desktops and Servers
- | RJ45

Package & Dimension

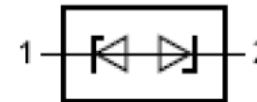


SOD323		
DIM.	MIN.	MAX.
A	0.80	1.10
B	0.25	0.40
C	0.10	0.25
D	1.60	1.80
E	1.15	1.35
F	2.30	2.70
G	0.15	0.45
H	---	0.05
I	0.15	0.25

All Dimensions in millimeter

PIN ASSIGNMENT	
1	Cathode
2	Cathode

Layout



LSP2103

1A Low Dropout CMOS LDO

Features

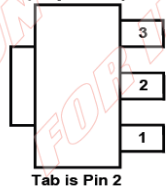
Output Voltage Available in 1.5V, 1.8V, 2.5V and 3.3V
Stable with a Ceramic Output Capacitor of 4.7uF or Higher
Low Dropout Voltage: 500mV at 1 A
Typical low Quiescent Current 40uA
Over Temperature Shutdown
Short Circuit Protection
Package: SOT223-3L, TO252-3L

Applications

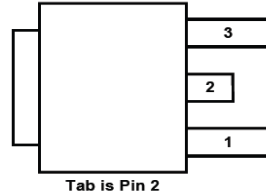
- | SATA Power Supply
- | LCD TV/ Monitors
- | Wireless Devices
- | Communication Devices
- | Portable Electronics
- | Post Regulator for SMPS

Package & Dimension

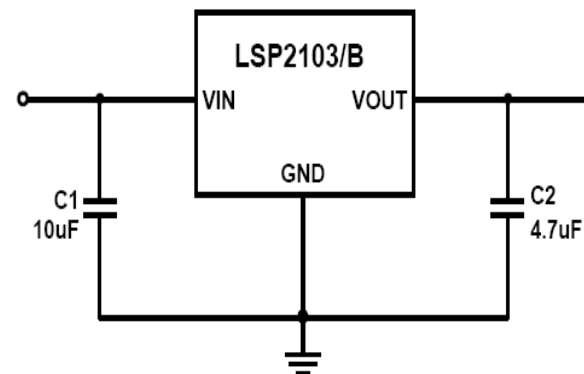
SOT223-3L
(Top View)



TO252-3L
(Top View)



Application Circuit



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LSP2159

1.5A Low Dropout CMOS LDO

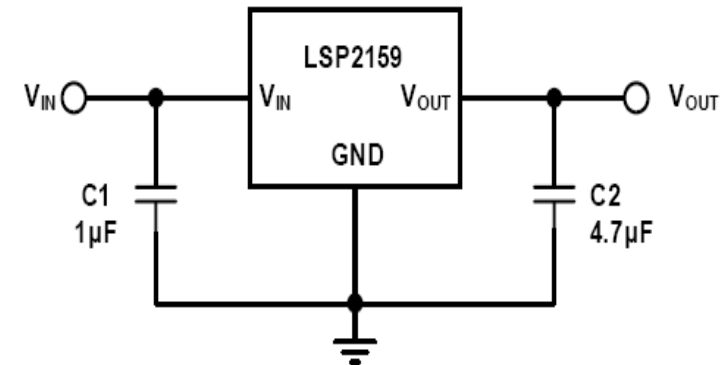
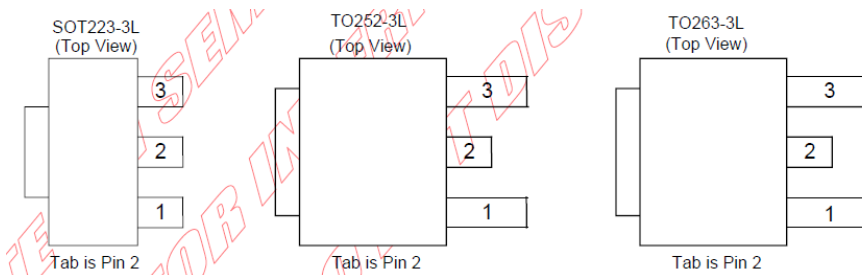
Features

- Output Voltage Available in 1.5V, 1.8V, 2.5V, 2.8V, 2.85V, 3.0V, 3.3V, 5.0V
- Stable with a Ceramic Output Capacitor of 4.7uF or Higher
- Low Dropout Voltage: 600mV at 1.5 A
- Typical low Quiescent Current 95uA
- Over Temperature Shutdown
- Short Circuit Protection
- Low Temperature Coefficient
- Standard SOT223-3L, TO252-3L and TO263-3L Packages

Applications

- | SATA Power Supply
- | LCD TV/ Monitors
- | Wireless Devices
- | Communication Devices
- | Portable Electronics
- | Post Regulator for SMPS

Package & Dimension



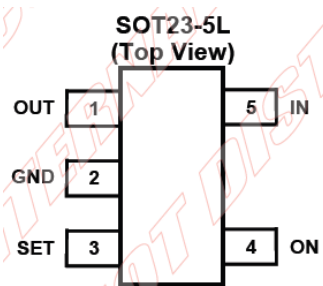
LSP5101

Current Limited Load Switch

Features

- 2.7V to 5.5V Input voltage range
- Programmable over current threshold
- Fast transient response: <1us response to short circuit
- Low quiescent current
- 15uA typical
- 1uA max with Switch off
- Only 2.5V needed for ON/OFF Control
- Under Voltage Lockout
- Thermal shutdown
- Package: SOT23-5L

Package & Dimension



Applications

- | Peripheral ports
- | Notebook computers
- | Personal communication devices
- | Hot Swap Supplier ☑

Application Circuit

