

Lite-On Semiconductor Cellular Phone Platform Solutions



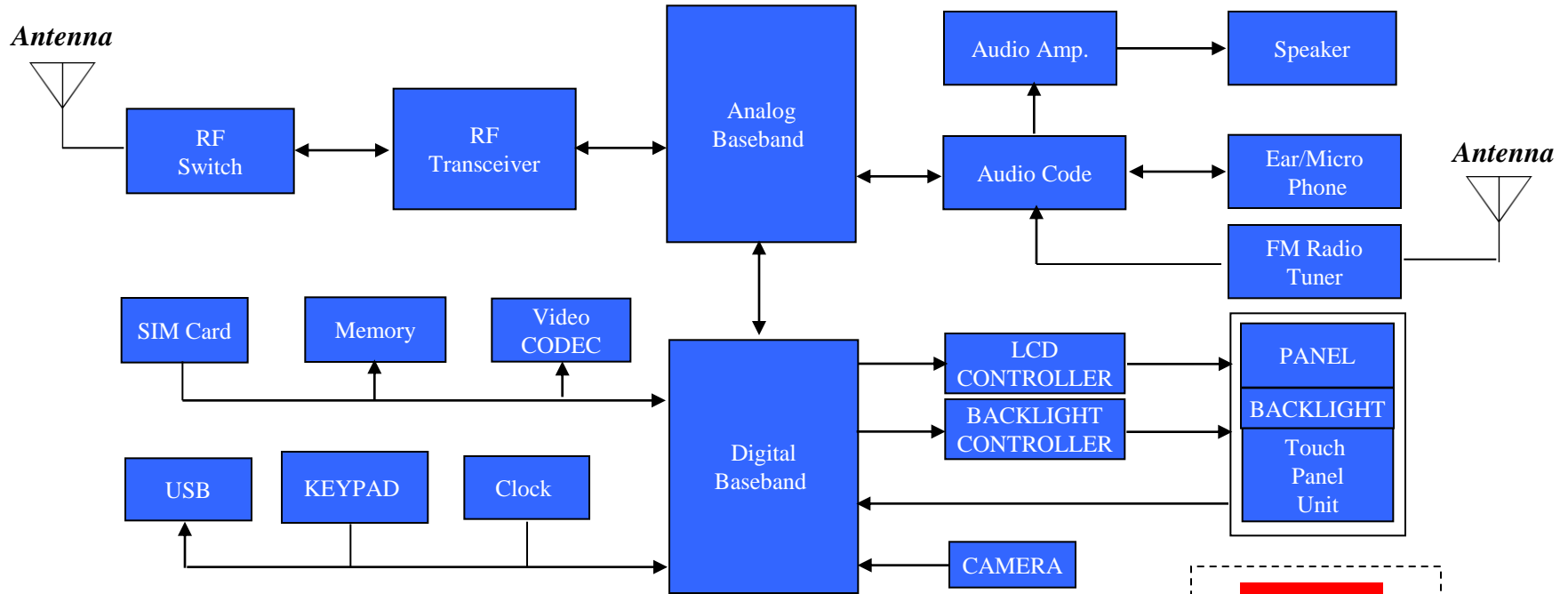
WORLD PRODUCTS, LLC

ELECTRONIC COMPONENT SOLUTIONS

sales@worldproducts.com || www.worldproducts.com

Exclusive agent in the America's for all Lite-On Semiconductor products.

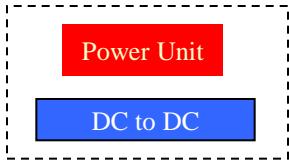
Mobile Phone Block Diagram



- ESD**
- L02ESD5VF6-5
 - L03ESDL5V0CE2
 - L03ESDL5V0CP2
 - L09ESD3V3CE2
 - L09ESD3V3CP2
 - L13ESD5V0CE2
 - L15ESDL5V0D6-4

- ESD**
- L15ESD12VE2
 - L15ESD24VE2
 - L16ESD24VA2
 - L18ESD12VA2

- ESD+EMI Filter**
- LEF01016F6-2
 - LEF032116F6-2
 - LEFH1701TC-6
 - LEFH1701TG-8



LSC Product Selection Guide

Surface Mount ESD Protection Device

Part Number	Peak Power Dissipation 8x20μs W	Reverse standoff voltage	Max Reverse Leakage @ VR	Max Clamping Voltage @8x20μs	Peak Pulse Current 8x20μs	Off-State Capacitance 1MHz Zero DC Bias	Package
		VR	IR	Vc	Ipp	Co	
		V	μA	V	A	pF	
L02ESD5V0F6-5	25	5	0.025	12	2.5	19	SOT-563
L03ESDL5V0CE2	30	5	0.1	15	2	3.5	SOD-882
L03ESDL5V0CP2	30	5	0.1	15	2	3.5	SOD-923
L09ESD3V3CE2	90	3.3	0.5	18	5	15	SOD-882
L09ESD3V3CP2	90	3.3	0.5	18	5	15	SOD-923
L13ESD5V0CE2	130	5	0.01	14	12	45	SOD-923
L15ESDL5V0D6-4	150	5	1	19	8	3	SOT-363
L15ESD12VE2	150	12	0.05	25	6	75	SOD-882
L15ESD24VE2	150	24	0.05	50	6	50	SOD-882
L16ESD24VA2	160	24	0.05	55	3	35	SOD-523
L18ESD12VA2	180	12	0.05	30	6	75	SOD-523

LSC Product Selection Guide

Surface Mount ESD Protection Device with EMI Filter

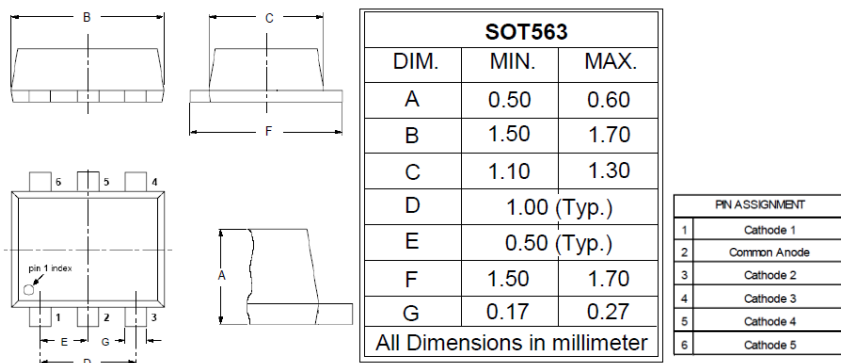
Part Number	Peak Power Dissipation 8x20μs	Reverse standoff voltage	Max Reverse Leakage @ VR	Resistance	Off-State Capacitance 0MHz 2.5V DC Bias	Off-State Capacitance 1MHz Zero DC Bias	Package
		VR	IR	R	Co	Co	
	W	V	uA	Ohm	pF	pF	
LEF01016F6-2	----	5	5	10	----	160	SOT-563
LEF03216F6-2	-----	5	5	32	-----	160	SOT-563
LEFH1701TC-6	----	5	0.5	17nH	2.5	----	SLP2513P12
LEFH1701TG-8	---	5	0.5	17nH	23.5	----	SLP3313P16



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

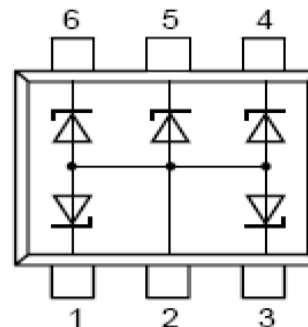
Package & Dimension



Applications

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

Layout



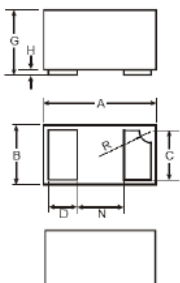
Features

- Protects One Power or I/O Line
- Max. Peak Pulse Power is 30Watts @ 8/20us
- Low Clamping Voltage
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

Applications

- Computers & Peripherals
- Communication System
- Portable Electronics
- Cellular handsets and Accessories
- Notebooks & Handhelds
- Digital Cameras

Package & Dimension

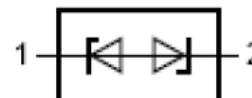


SOD-882		
DIM.	MIN.	MAX.
A	0.95	1.07
B	0.55	0.68
C	0.45	0.55
D	0.20	0.30
G	0.47	0.53
H	0.00	0.05
N	0.40 (Typ.)	
R	0.05	0.15

All Dimensions in millimeter

PIN ASSIGNMENT	
1	Cathode
2	Cathode

Layout



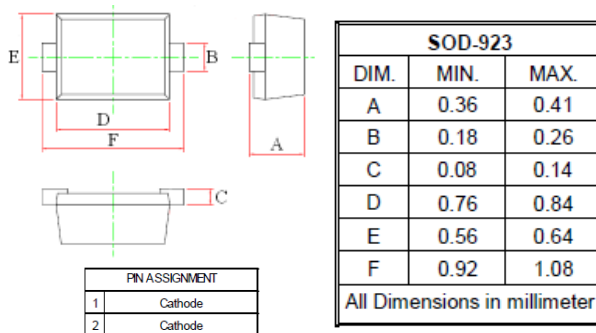
Features

- Protects One Power or I/O Line
- Max. Peak Pulse Power is 30Watts @ 8/20us
- Low Clamping Voltage
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

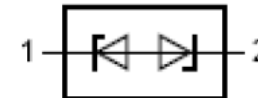
Applications

- Computers & Peripherals
- Communication System
- Portable Electronics
- Cellular handsets and Accessories
- Notebooks & Handhelds
- Digital Cameras

Package & Dimension



Layout



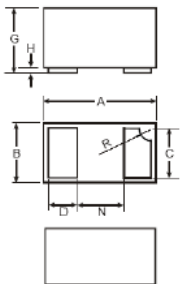
Features

- Protects One Power or I/O Line
- Max. Peak Pulse Power is 90Watts @ 8/20us
- Low Clamping Voltage
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

Applications

- MP3 players
- Communication System
- Portable Electronics
- Cellular handsets and Accessories
- Notebooks & Handhelds
- Digital Cameras

Package & Dimension

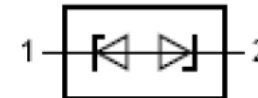


SOD-882		
DIM.	MIN.	MAX.
A	0.95	1.07
B	0.55	0.68
C	0.45	0.55
D	0.20	0.30
G	0.47	0.53
H	0.00	0.05
N	0.40 (Typ.)	
R	0.05	0.15

All Dimensions in millimeter

PIN ASSIGNMENT	
1	Cathode
2	Cathode

Layout



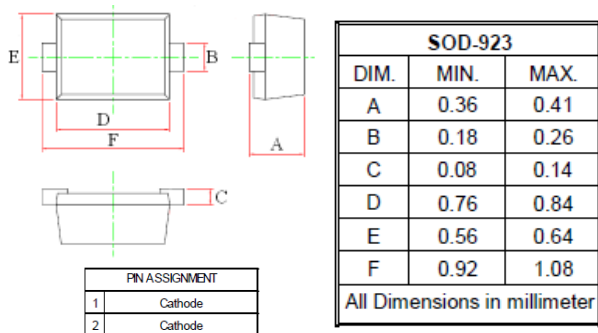
Features

- Protects One Power or I/O Line
- Max. Peak Pulse Power is 90Watts @ 8/20us
- Low Clamping Voltage
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

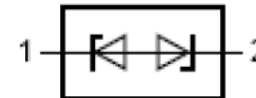
Applications

- MP3 players
- Communication System
- Portable Electronics
- Cellular handsets and Accessories
- Notebooks & Handhelds
- Digital Cameras

Package & Dimension



Layout



L13ESD5V0CE2

130W Bidirectional in SOD882

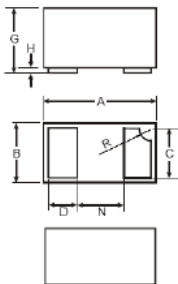
Features

- 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

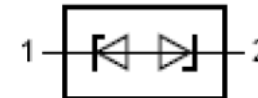


SOD-882		
DIM.	MIN.	MAX.
A	0.95	1.07
B	0.55	0.68
C	0.45	0.55
D	0.20	0.30
G	0.47	0.53
H	0.00	0.05
N	0.40 (Typ.)	
R	0.05	0.15

All Dimensions in millimeter

PIN ASSIGNMENT	
1	Cathode
2	Cathode

Layout



L15ESDL5V0D6-4

3pF 4CH ARRAY in SOT363

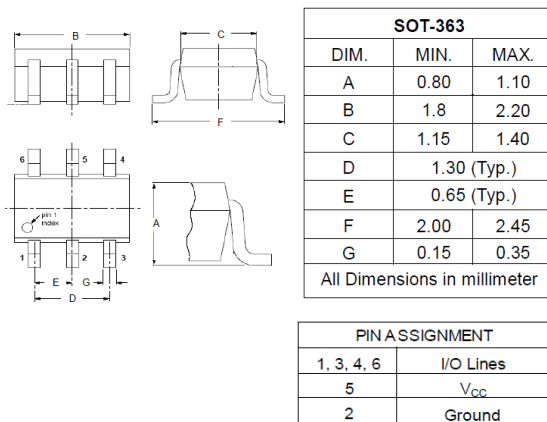
Features

- Protects Up to Four I/O Line & Power Line
- Low Capacitance <3pF for High Speed Interface
- Low Clamping Voltage
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

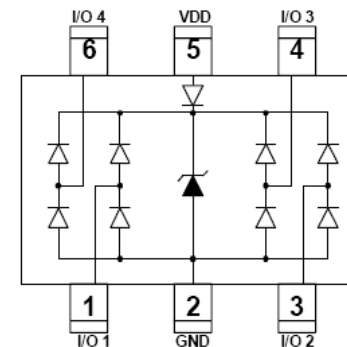
Applications

- Displays
- DVI
- USB2.0/3.0
- USB OTG
- IEEE 1394 Firewire Port
- Ethernet

Package & Dimension



Layout



L15ESD12VE2

150W 12V Directional in SOD882

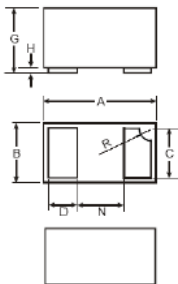
Features

- Uni-directional ESD Protection of Single Line
- Max. Peak Pulse Power is 150Watts @ 8/20us
- Capacitance is 45pF (Typical)
- Low Clamping Voltage
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

Applications

- Computers and Peripherals
- Communication System
- Portable Electronics
- Audio & Video Equipment

Package & Dimension



SOD-882		
DIM.	MIN.	MAX.
A	0.95	1.07
B	0.55	0.68
C	0.45	0.55
D	0.20	0.30
G	0.47	0.53
H	0.00	0.05
N	0.40 (Typ.)	
R	0.05	0.15

All Dimensions in millimeter

PIN ASSIGNMENT	
1	Cathode
2	Cathode

Layout



L15ESD24VE2

150W 24V Directional in SOD882

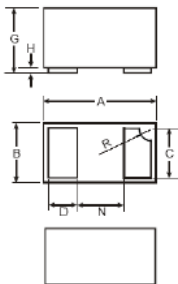
Features

- Uni-directional ESD Protection of Single Line
- Max. Peak Pulse Power is 150Watts @ 8/20us
- Low Clamping Voltage
- Capacitance is 25pF (Typical)
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

Applications

- Computers and Peripherals
- Communication System
- Portable Electronics
- Audio & Video Equipment

Package & Dimension



SOD-882		
DIM.	MIN.	MAX.
A	0.95	1.07
B	0.55	0.68
C	0.45	0.55
D	0.20	0.30
G	0.47	0.53
H	0.00	0.05
N	0.40 (Typ.)	
R	0.05	0.15

All Dimensions in millimeter

PIN ASSIGNMENT	
1	Cathode
2	Cathode

Layout



L16ESD24VA2

160W 24V Directional in SOD523

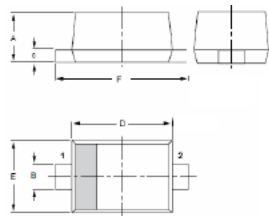
Features

- Protection of Single Line
- Max. Peak Pulse Power is 160Watts @ 8/20us
- Low Clamping Voltage
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

Applications

- Computers and Peripherals
- Communication System
- Portable Electronics
- 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



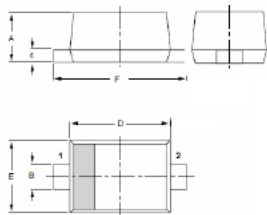
Features

- Protection of Single Line
- Max. Peak Pulse Power is 180Watts @ 8/20us
- Low Clamping Voltage is 30V
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

Applications

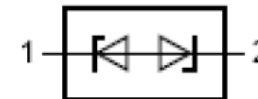
- Computers and Peripherals
- Communication System
- CAN Bus Protection
- Data Line
- Audio & Video Equipment

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		

Layout



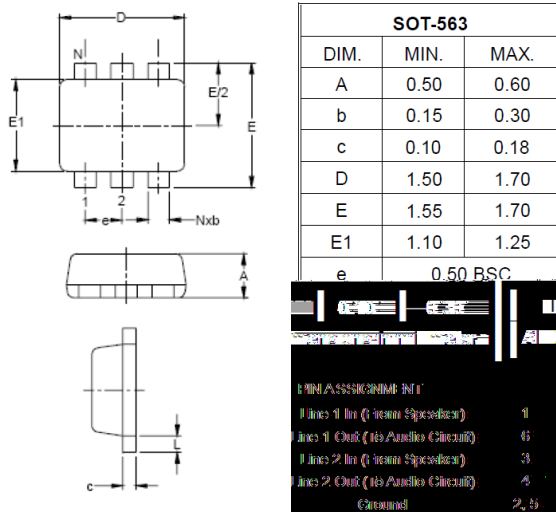
Features

- Bidirectional EMI/RFI Filter with Integrated ESD Protection
- Two Lines Protection and Filtering
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

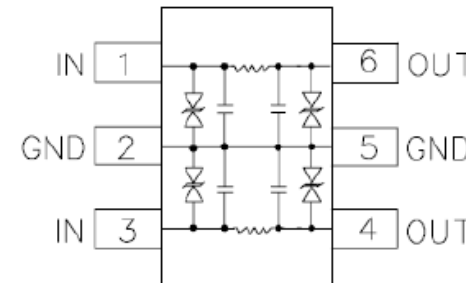
Applications

- Color LCD Protection
- Cell Phone CCD Camera Lines
- Clamshell /cell /phones
- Audio Filter
- Notebooks
- MP3 Players

Package & Dimension



Layout



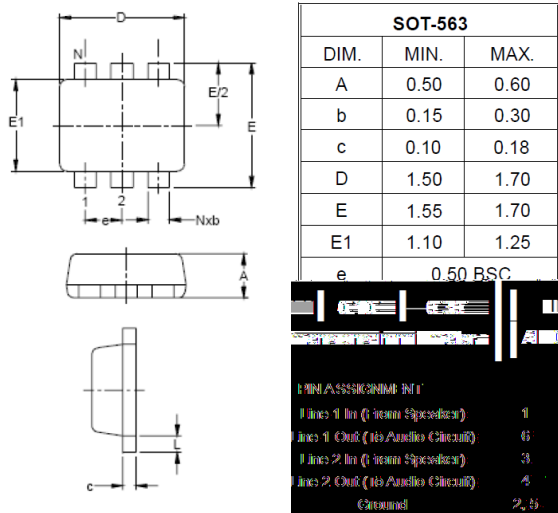
Features

- Bidirectional EMI/RFI Filter with Integrated ESD Protection
- Two Lines Protection and Filtering
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

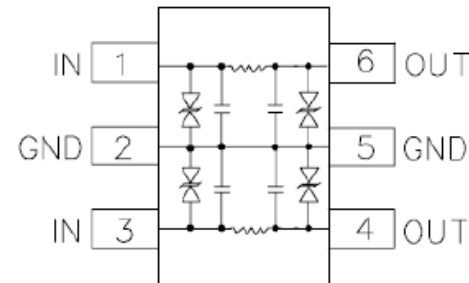
Applications

- Color LCD Protection
- Cell Phone CCD Camera Lines
- Clamshell /cell /phones
- Audio Filter
- Notebooks
- MP3 Players

Package & Dimension



Layout



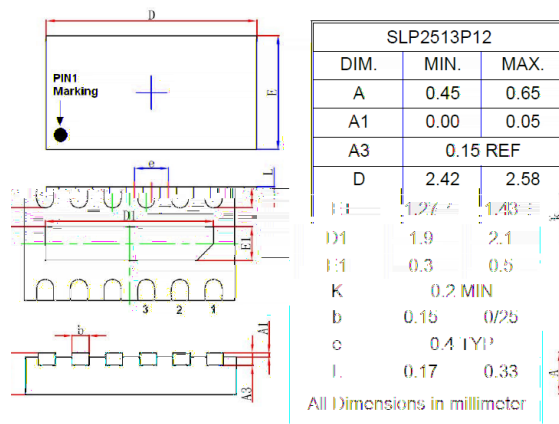
Features

- Pi-style EMI Filters in a Capacitor Inductor-Capacitor (LCL) Network
- Greater than 30dB Attenuation at 1GHz
- Six Lines Protection and Filtering
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

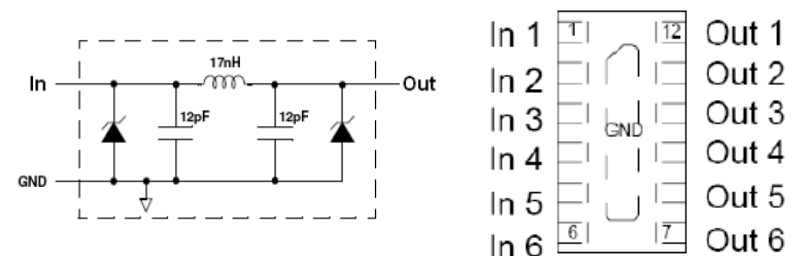
Applications

- Color LCD Protection
- Cell Phone CCD Camera Lines
- Clamshell / Cell / Phones
- Audio Filter

Package & Dimension



Layout



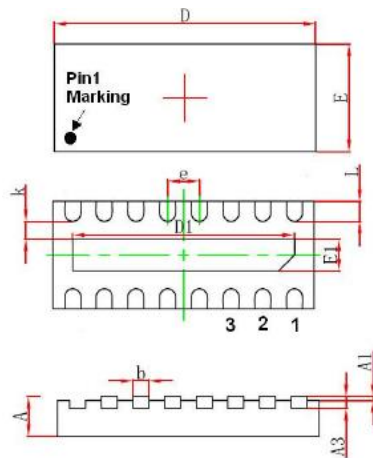
Features

- Pi-style EMI Filters in a Capacitor Inductor-Capacitor (LCL) Network
- Greater than 30dB Attenuation at 1GHz
- Six Lines Protection and Filtering
- IEC 61000-4-2, Level 4 (ESD), >±15KV by Air, >±8KV by Contact

Applications

- Color LCD Protection
- Cell Phone CCD Camera Lines
- Clamshell / Cell / Phones
- Audio Filter

Package & Dimension



SLP3313P16		
DIM.	MIN.	MAX.
A	0.45	0.65
A1	0.00	0.05
A3	0.15 REF	
D	3.22	3.38
E	1.27	1.43
D1	2.7	2.9
E1	0.3	0.5
K	0.2 MIN	
b	0.15	0/25
e	0.4 TYP	
L	0.17	0.33
All Dimensions in millimeter		

Layout

