

# L35ESD12VCB2

## ESD PROTECTION DEVICE

**STAND-OFF VOLTAGE - 12.0 V**  
**POWER DISSIPATION - 350 W**

### GENERAL DESCRIPTION

Electro Static Discharge (ESD) protection diodes in ultra Small SMD plastic package designed to protect one signal line from the damage caused by ESD and other transients.

### FEATURES

- Bidirectional ESD protection of one line.
- Max. peak pulse power : Ppp = 350W at tp = 8/20 us.
- ESD protection > 25KV per MIL-STD-883C, Method 3015-6:class3.
- IEC 61000-4-2 (ESD), > ±30KV (air) ; > ±27KV (contact)
- Qualified to ACE-Q101 Rev\_C

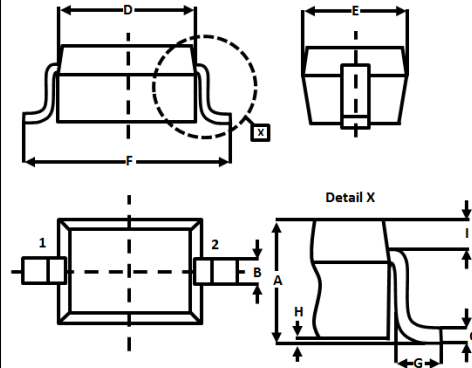
### APPLICATION

- Computers and peripherals
- Communication system
- Notebooks, desktops & servers
- Portable electronics
- Cellular handsets and accessories

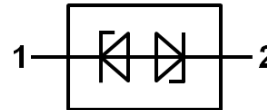
### MECHANICAL DATA

- Case material: "Green" molding compound UL flammability classification 94V-0 (No Br. Sb, Cl)
- Terminals: Lead Free Plating( Matte Tin Finish)
- Component in accordance to RoHs 2011/65/EU

### SOD-323



SOD-323		
DIM.	MIN.	MAX.
A	0.8	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

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power ( tp = 8/20 us)	P <sub>PPM</sub>	350	W
Peak pulse current ( tp = 8/20 us)	I <sub>PP</sub>	15	A
Operating junction temperature range	T <sub>J</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C
Soldering Temperature, t max =10s	T <sub>L</sub>	260	°C

### ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	CONDITIONS	MIN.	MAX	UNIT
Reverse stand-off voltage	V <sub>DRM</sub>	--	--	12.0	V
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> = 1 mA	13.3	15.5	V
Reverse leakage current	I <sub>RM</sub>	V <sub>DRM</sub> = 12 V	--	1	uA
Diode Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f =1MHz	--	100	pF
Clamping voltage	V <sub>CL</sub>	I <sub>PP</sub> = 15A, tp = 8/20 uS	--	24	V

REV.5, DEC-2018, KSIR23

# RATING AND CHARACTERISTIC CURVES L35ESD12VCB2

FIG.1- 8/20us pulse waveform according to IEC 61000-4-5

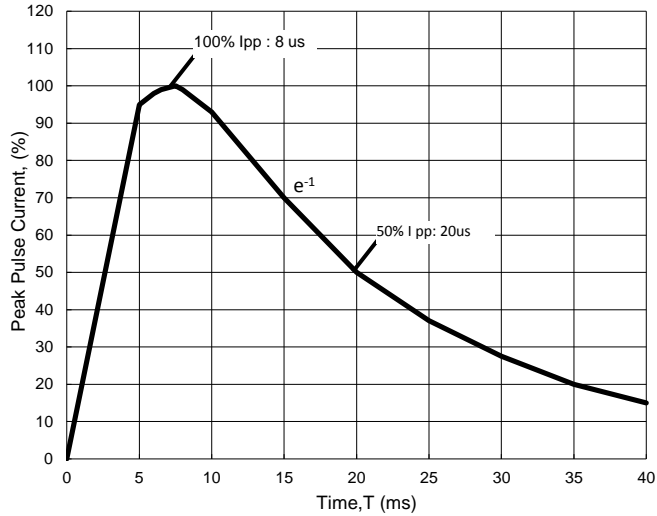


FIG.2- ESD pulse waveform according to IEC 61000-4-2

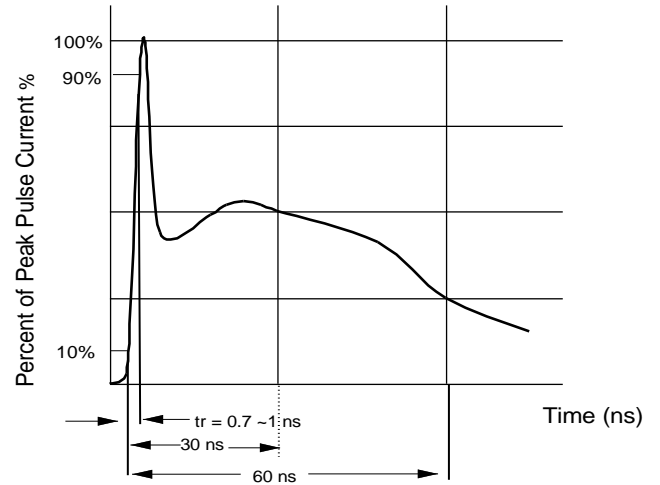


FIG.3- power dissipation versus pulse time

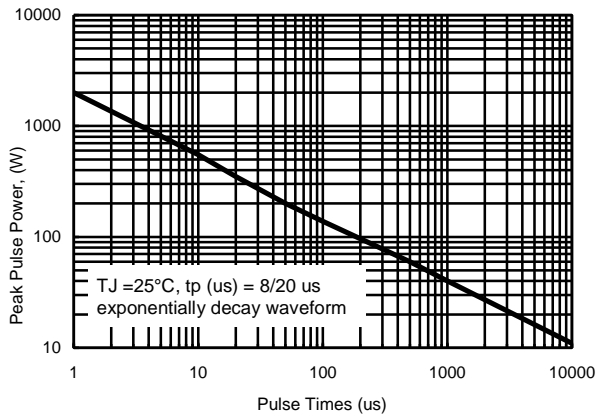


FIG.4- peak pulse power versus T<sub>J</sub>

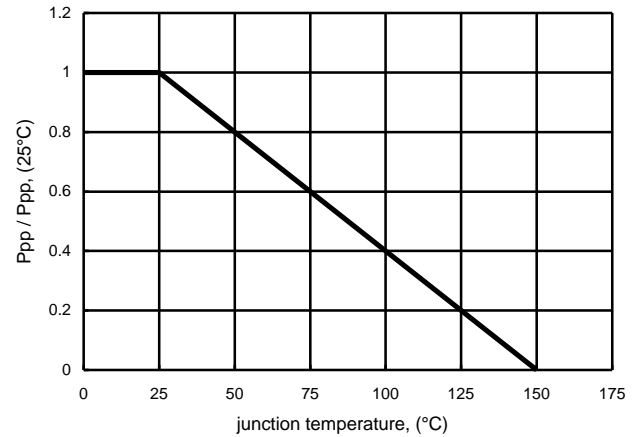


FIG.5- typical junction capacitance

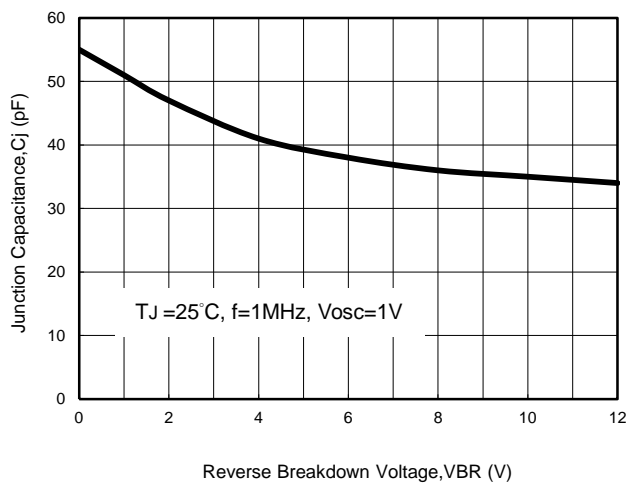
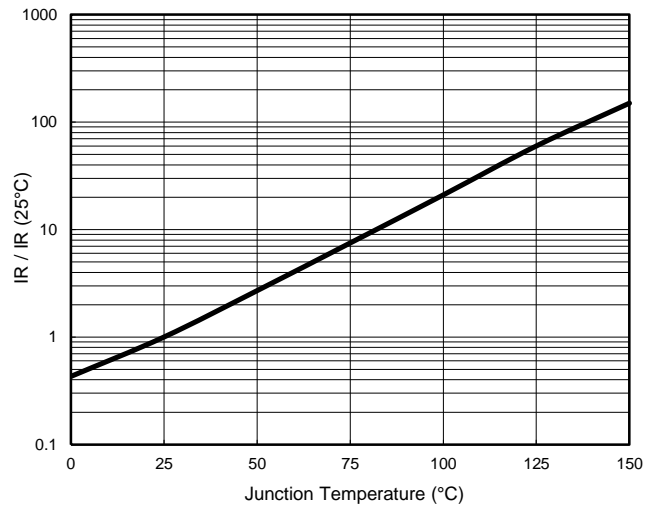


FIG.6- reverse leakage current versus T<sub>J</sub>



# RATING AND CHARACTERISTIC CURVES

## L35ESD12VCB2

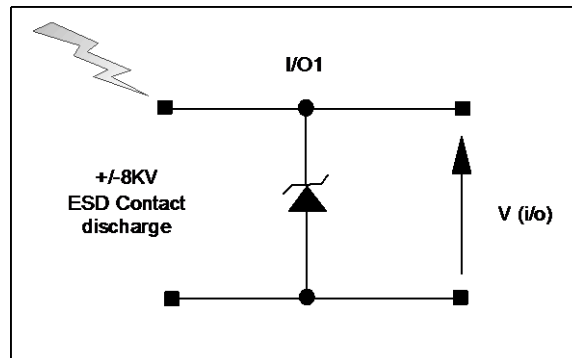


FIG.7- ESD Test Configuration

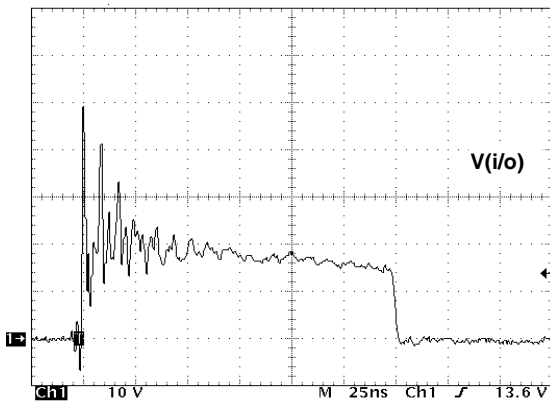


FIG.8- Clamped +8 kV ESD voltage waveform

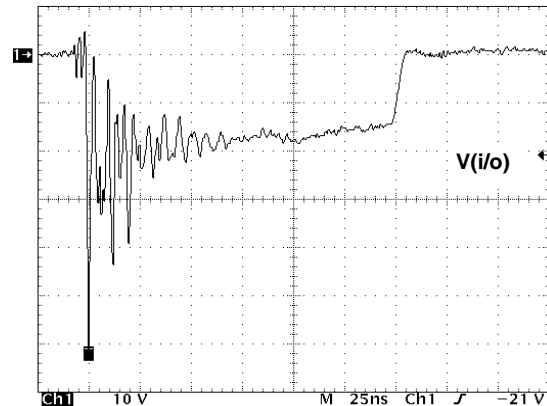
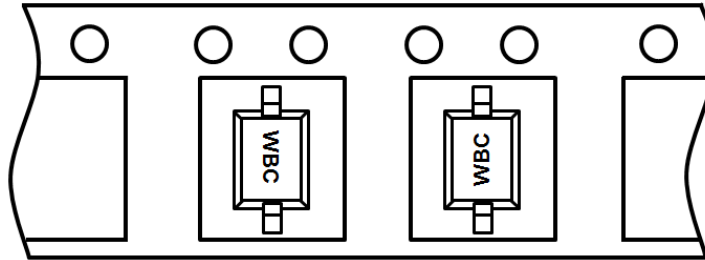


FIG.9- Clamped -8 kV ESD voltage waveform

**MARKING AND PACKAGING INFORMATION**  
**L35ESD12VCB2**

**Marking & Orientation**

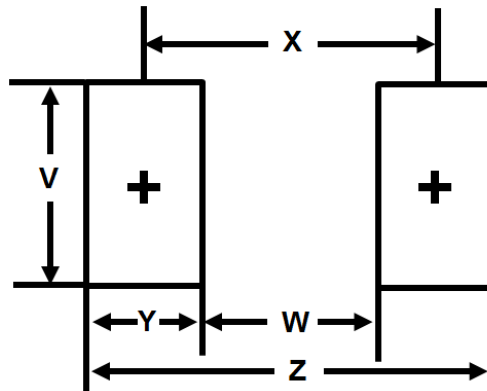


Note: Marking is none direction

**Packaging Information**

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
L35ESD12VCB2	3000	7	45000	90K/180K

**SOD-323 Soldering Pad Layout**



Dim.	Millimeters	Inches
Z	3.05	0.120
X	2.15	0.084
W	1.25	0.049
Y	0.90	0.035
V	0.70	0.027