

ESD PROTECTION DIODE

**STAND-OFF VOLTAGE - 12 Volts
POWER DISSIPATION - 350 Watts**

GENERAL DESCRIPTION

Ultra low capacitance bidirectional ElectroStatic Discharge (ESD) protection diodes in small Surface-Mounted Device (SMD) plastic packages designed to protect one data line from the damage caused by ESD.

FEATURES

- Protects one power or I/O line
- Max. peak pulse power : P_{pp} = 350W at t_p = 8/20 us
- Ultra Low Capacitance : 0.6pF Typical
- Low clamping voltage
- IEC 61000-4-2, level 4 (ESD), > ±30KV (air) ; > ±27KV (contact)
- Qualified to AEC-Q101 Rev_C

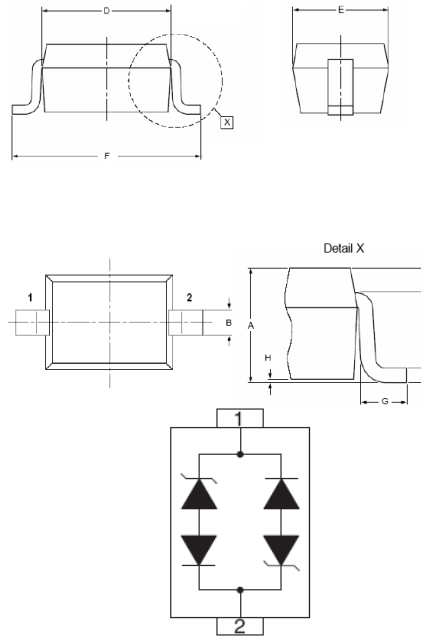
APPLICATION

- Ethernet - 10/100/1000 Base T
- Handheld - Wireless Systems
- USB Interface

MECHANICAL DATA

- Case material: "Green" molding compound UL flammability classification 94V-0 (No Br, Sb, Cl)
- Terminals: Lead Free Plating (Matte Tin Finish), solderable per J-STD-002 and JESD22-B/02.
- Moisture Sensitivity: Leve 1 per J-STD-020C
- Component in accordance to RoHs 2011/65/EU

SOD-323



SOD-323		
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	----	0.1
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.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power (8/20us waveform)	P _{PP}	350	W
Peak pulse current (8/20us waveform)	I _{PP}	10	A
Operating junction temperature range	T _J	-55 to +125	°C
Storage temperature range	T _{STG}	-55 to +150	°C
Soldering temperature, t max = 10s	T _L	260	°C

ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX	UNIT
Reverse standoff voltage	--	V _{DRM}	--	--	12	V
Breakdown voltage	I _t = 1mA	V _{BR}	13.3	--	--	V
Reverse leakage current	V _{DRM} = 12V	I _{RM}	--	--	1	uA
Junction capacitance	V _R = 0V, f = 1MHz,	C _J	--	0.6	0.7	pF
Clamping voltage	I _{PP} = 1A (8/20 us)	V _C	--	--	23	V
	I _{PP} = 10A (8/20 us)		--	--	35	

REV. 1, Feb.-2017, KSIR87

**RATING AND CHARACTERISTIC CURVES
L35L12VCB2**

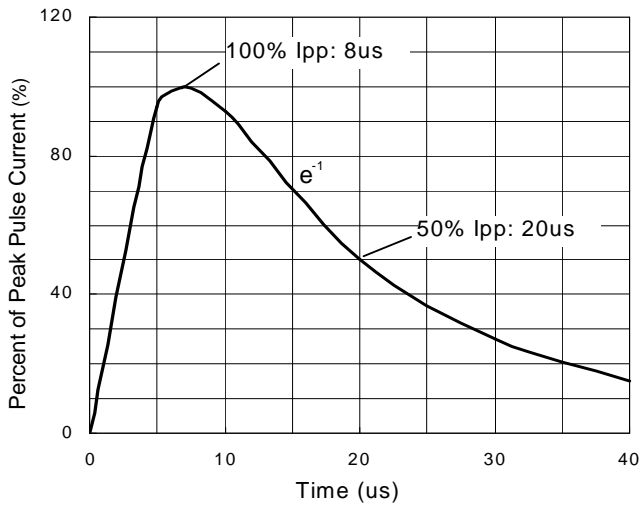


Figure 1. 8/20 us pulse waveform according to IEC 61000-4-5

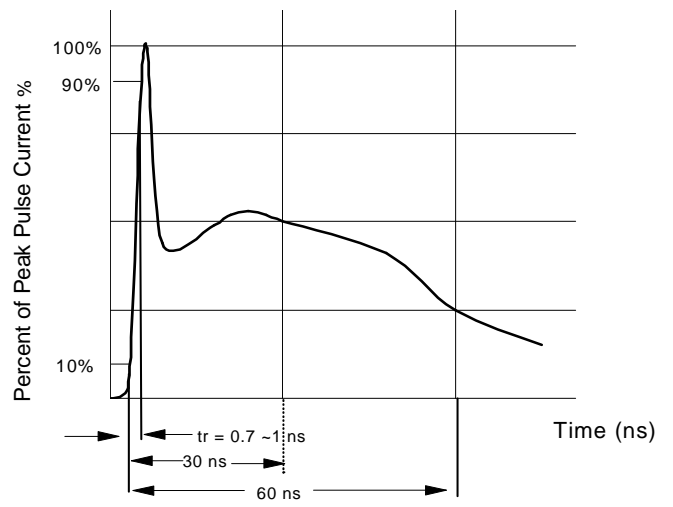


Figure 2. ESD pulse waveform according to IEC 61000-4-2

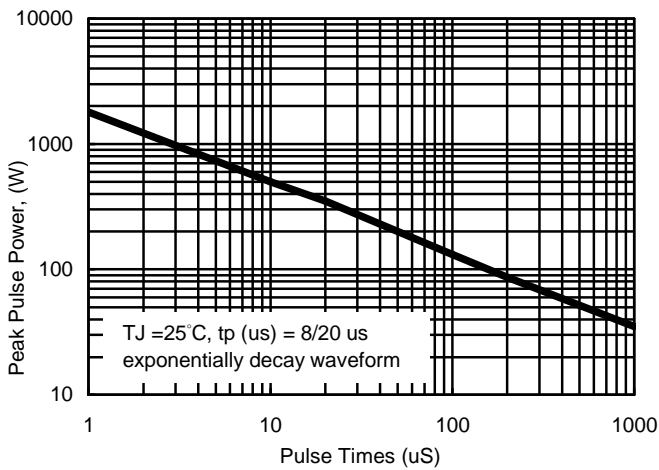


Figure 3. Power Dissipation versus Pulse Time

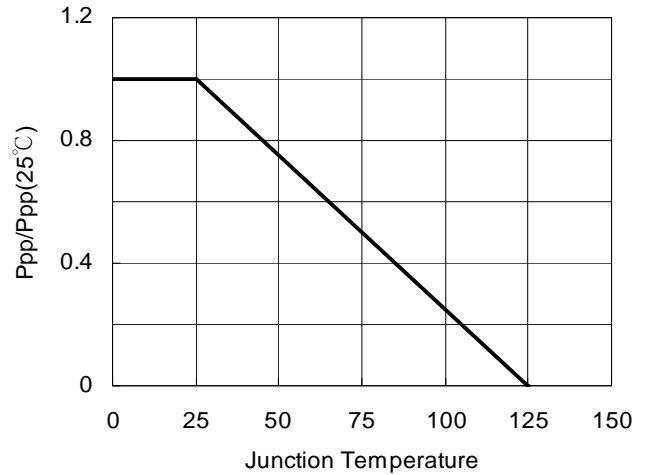


Figure 4. Peak pulse power versus TJ

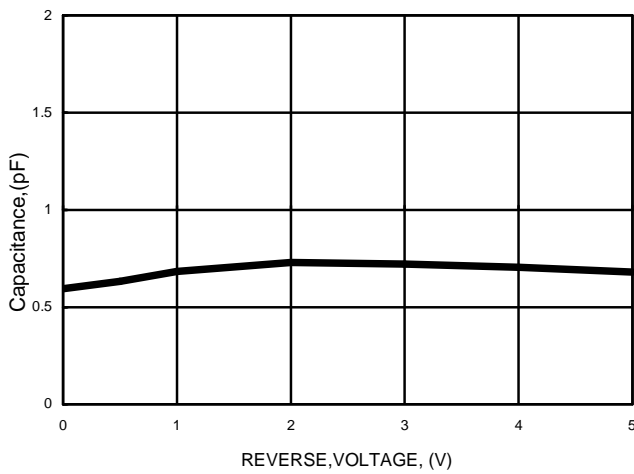


Figure 5. Typical Junction Capacitance

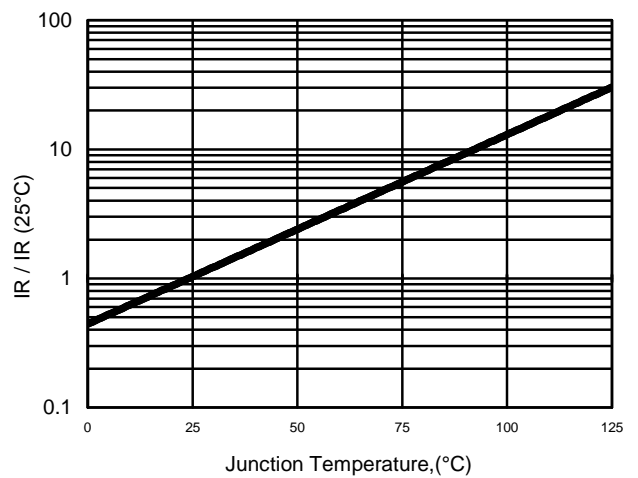


Figure 6. Reverse Leakage Current versus TJ

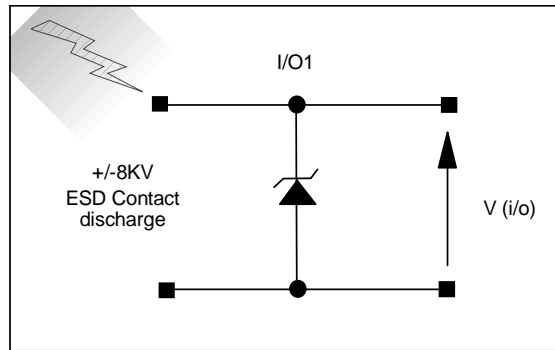


Figure 7. ESD Test Configuration

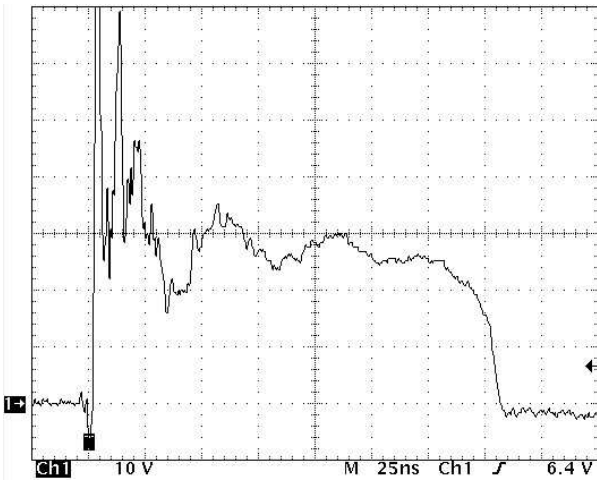


Figure 8. Clamped +8 kV ESD voltage waveform

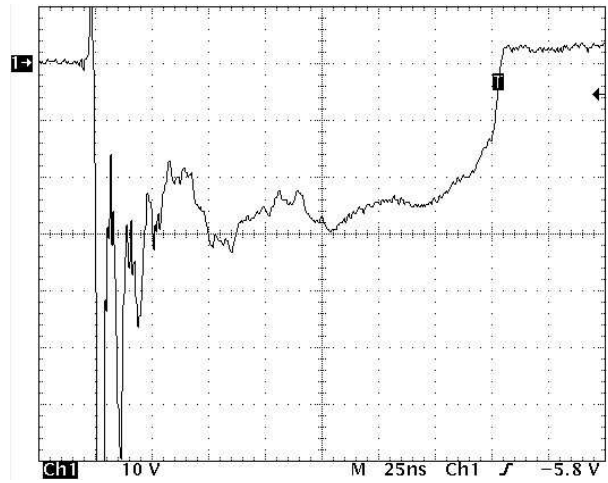
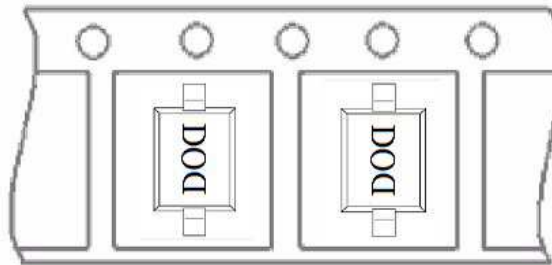


Figure 9. Clamped -8 kV ESD voltage waveform

MARKING AND PACKAGING INFORMATION
L35L12VCB2

Marking and Orientation :

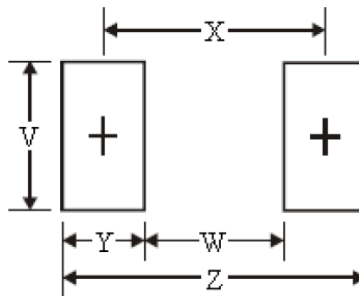


Note: Marking is none direction

Packaging Information :

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
L35L12VCB2	3000	7	45K	90K

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

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