

ESD PROTECTION DEVICE

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

FEATURES

- Protects one power or I/O line
- Max. peak pulse power: P_{pp} = 350W at t_p = 8/20us
- Ultra low capacitance: 0.6pF Typical
- Low clamping voltage
- IEC 61000-4-2, level 4 (ESD), > ±30KV (air); > ±27KV (contact)
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

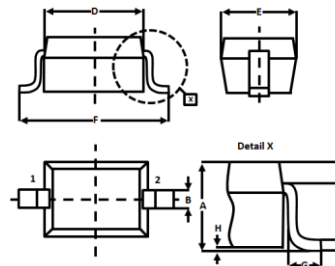
MECHANICAL DATA

- Package Material: "Green" molding compound UL flammability classification 94V-0 (No Br, Sb, Cl)
- Terminals: Lead free plating (Matte Tin finish), solderability per J-STD-002 and JESD22-B102
- Moisture Sensitivity: Level 1 per J-STD-020
- Component in accordance to RoHS 2011/65/EU

APPLICATION

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

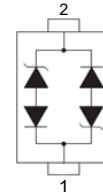
SOD-323



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	---	0.10
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 (t _p = 8/20us)	P _{PK}	350	W
Peak pulse current (t _p = 8/20us)	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	SYMBOL	CONDITIONS	MIN.	TYP.	MAX	UNIT
Reverse stand-off voltage	V _{RWM}	--	--	--	12	V
Breakdown voltage	V _{BR}	I _T = 1mA	13.3	--	--	V
Reverse leakage current	I _{RM}	V _{DRM} = 12V	--	--	1.0	uA
Junction capacitance	C _J	V _R = 0V, f = 1MHz	--	0.6	0.7	pF
Clamping voltage	V _C	I _{PP} = 1A, t _p = 8/20uS	--	--	23	V
		I _{PP} = 10A, t _p = 8/20uS	--	--	35	

Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

FIG.1 - 8/20us Pulse Waveform According to IEC 61000-4-5

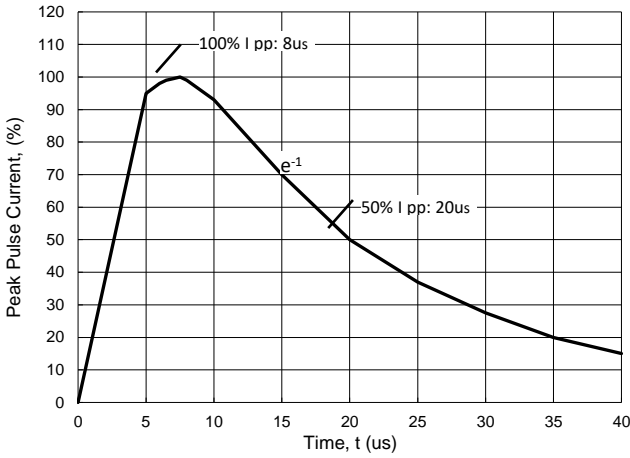


FIG.2 - ESD Pulse Waveform According to IEC 61000-4-2

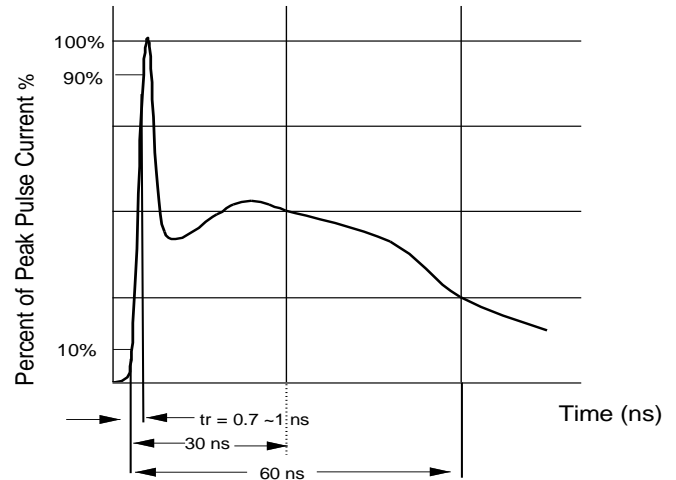


FIG.3 - Power Dissipation Versus Pulse Time

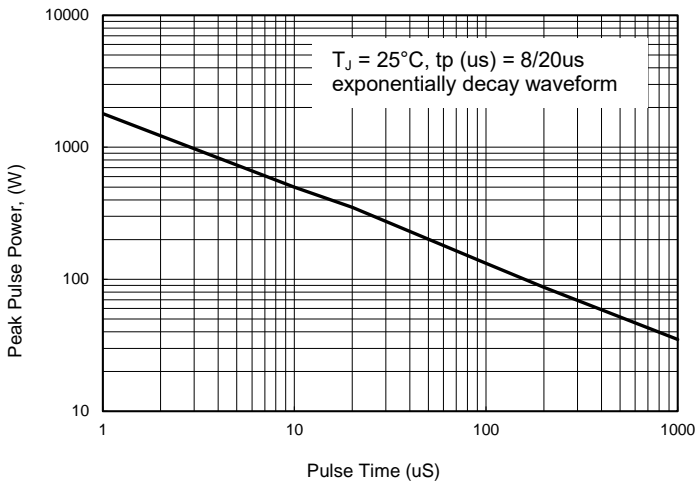


FIG.4 - Peak Pulse Power Versus T_J

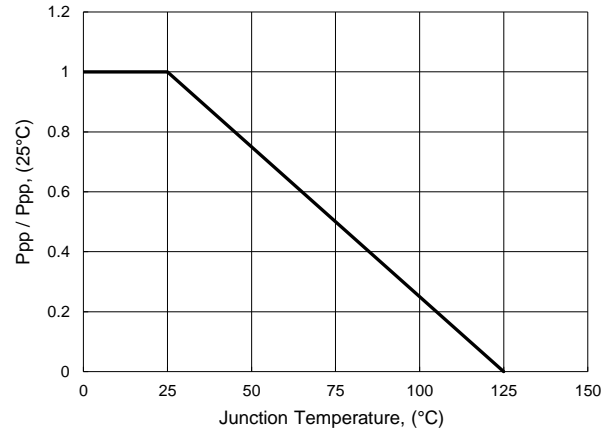


FIG.5 - Typical Junction Capacitance

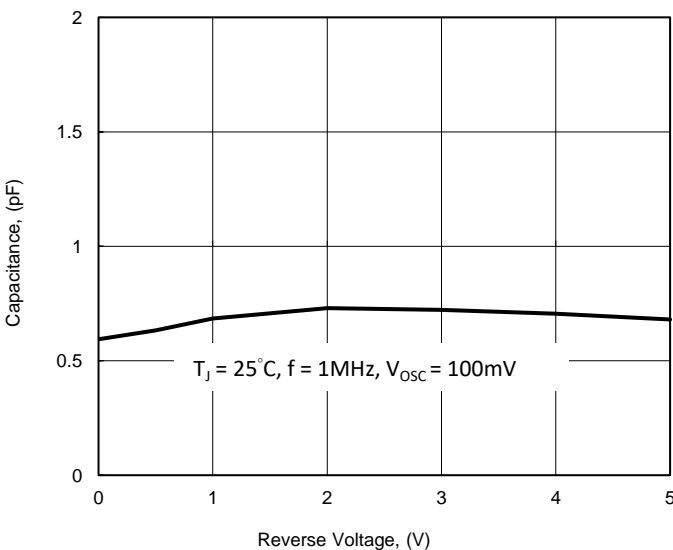
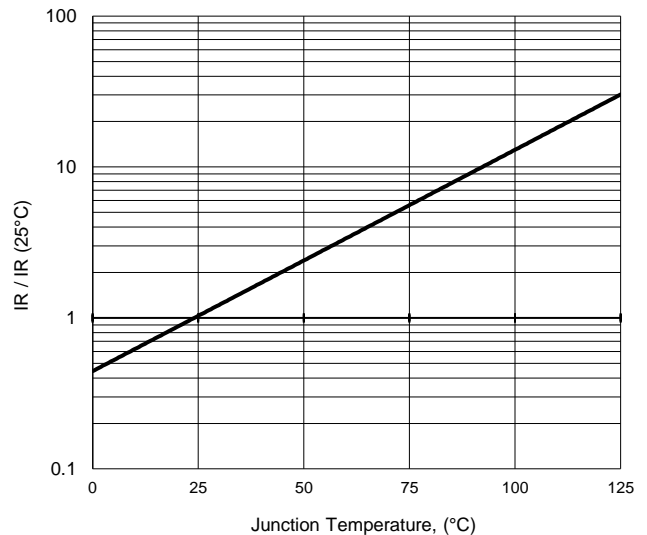


FIG.6 - Reverse Leakage Current Versus T_J



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
L35L12VCB2	SOD-323	3000pcs	Reel

Marking Information:

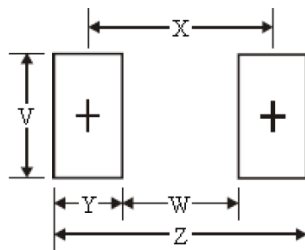


D00 = Product Type Marking Code

Packaging Information:

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

Suggested Pad Layout:



Dimensions	Value (in mm)
Z	3.05
X	2.15
W	1.25
Y	0.90
V	0.70

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