

## 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  $t_p = 8/20\mu s$
- Ultra low capacitance: 0.6pF Typical
- Low clamping voltage
- IEC 61000-4-2, level 4 (ESD),  $> \pm 30KV$  (air);  $> \pm 27KV$  (contact)
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

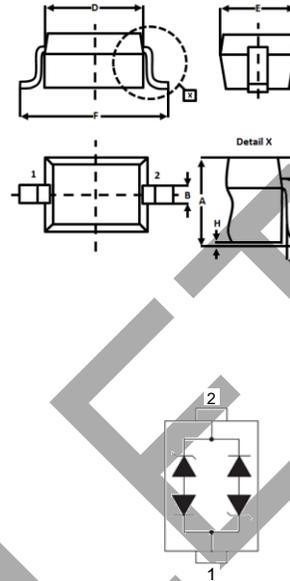
### MECHANICAL DATA

- 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 ( $t_p = 8/20\mu s$ )	$P_{PK}$	350	W
Peak pulse current ( $t_p = 8/20\mu s$ )	$I_{PP}$	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

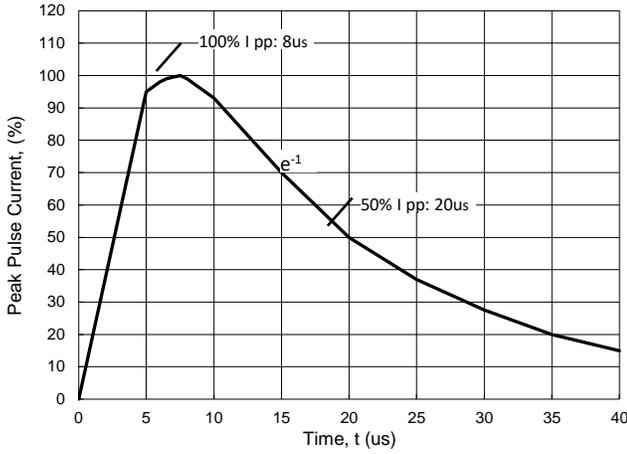
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Reverse stand-off voltage	$V_{RWM}$	--	--	--	12	V
Breakdown voltage	$V_{BR}$	$I_T = 1mA$	13.3	--	--	V
Reverse leakage current	$I_{RM}$	$V_{DRM} = 12V$	--	--	1.0	uA
Junction capacitance	$C_J$	$V_R = 0V, f = 1MHz$	--	0.6	0.7	pF
Clamping voltage	$V_C$	$I_{PP} = 1A, t_p = 8/20\mu s$	--	--	23	V
		$I_{PP} = 10A, t_p = 8/20\mu s$	--	--	35	

#### Notes:

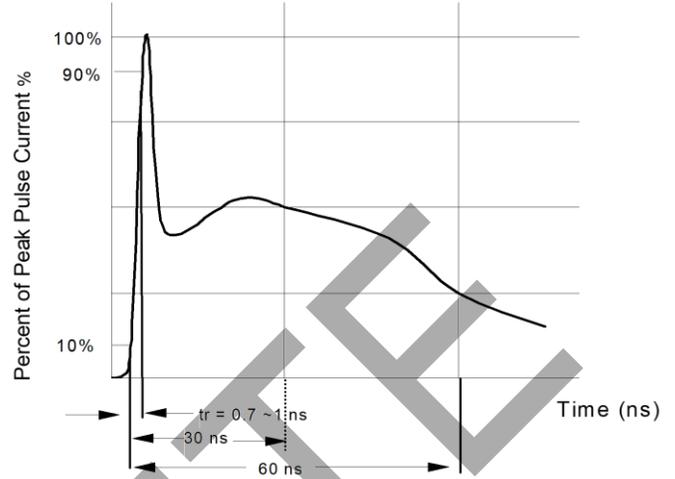
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and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

**RATING AND CHARACTERISTIC CURVES**  
**L35L12VCB2**

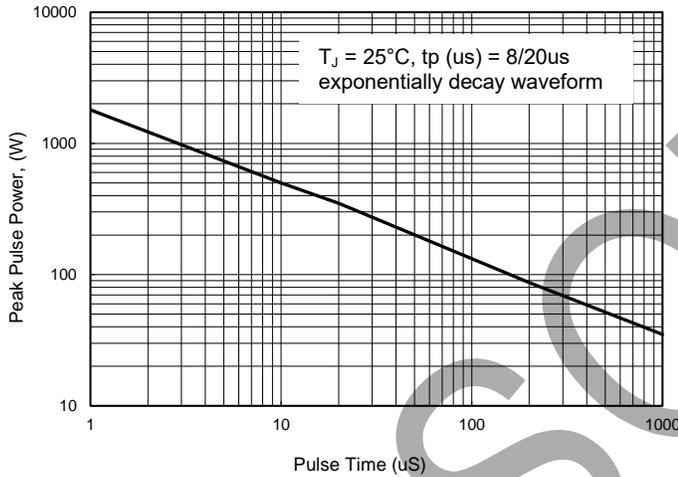
**FIG.1 - 8/20us Pulse Waveform According to IEC 61000-4-5**



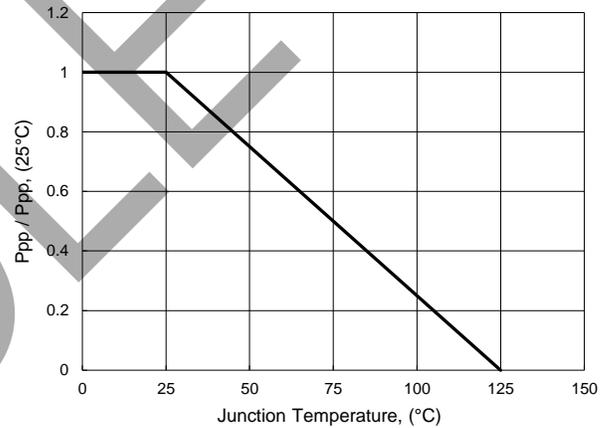
**FIG.2 - ESD Pulse Waveform According to IEC 61000-4-2**



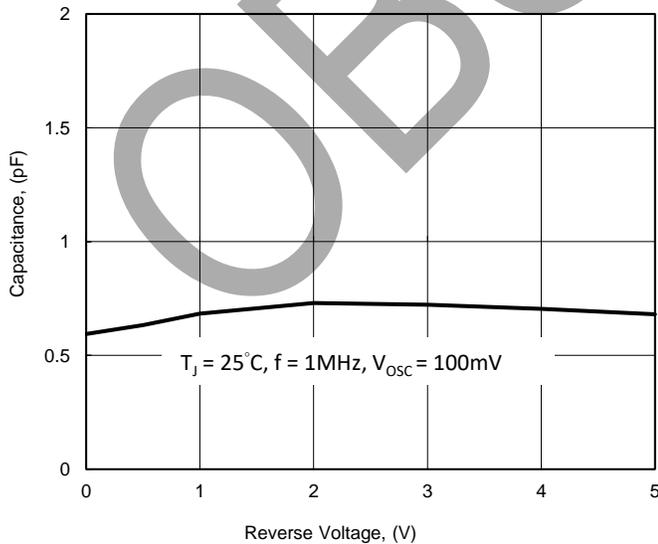
**FIG.3 - Power Dissipation Versus Pulse Time**



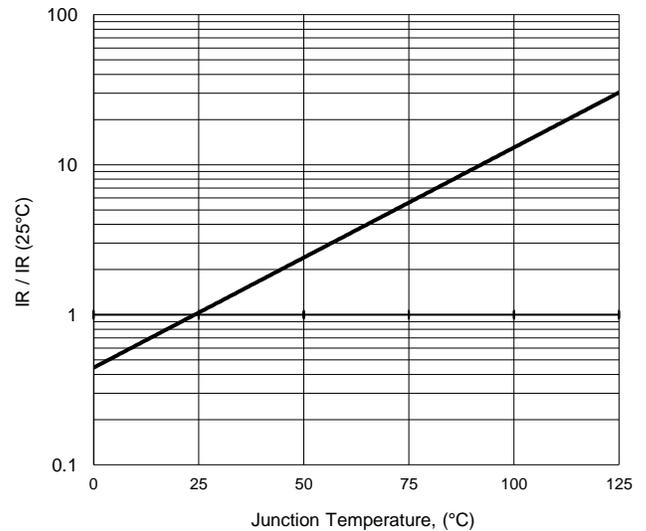
**FIG.4 - Peak Pulse Power Versus  $T_j$**



**FIG.5 - Typical Junction Capacitance**



**FIG.6 - Reverse Leakage Current Versus  $T_j$**



OBSOLETE - PART DISCONTINUED

**Ordering Information:**

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

**Marking Information:**

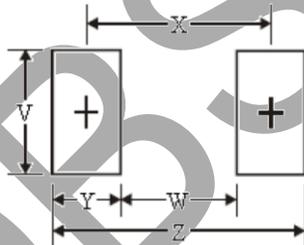


DOD = Product Type Marking Code

**Packaging Information:**

Device	Qty./Reel (Pcs)	Reel Dia. (Inch)	Qty./Box (Pcs)	Qty./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

OBSOLETE - PART DISCONTINUED

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