

**ESD PROTECTION DEVICE**

**STAND-OFF VOLTAGE – 3.3 Volts  
POWER DISSIPATION – 350 Watts**

**FEATURES**

- Protects one power or I/O line
- Max. peak pulse power : P<sub>pp</sub> = 350W at t<sub>p</sub> = 8/20 us
- Ultra Low Capacitance : 0.7pF 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)**

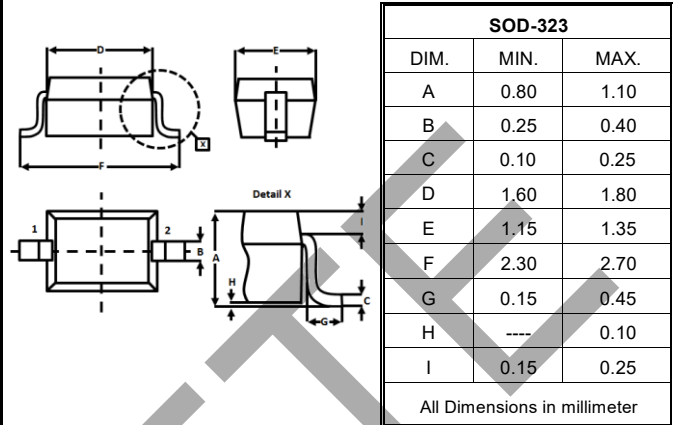
**MECHANICAL DATA**

- 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 interfaces

**SOD-323**



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 <sub>p</sub> = 8/20 us)	P <sub>PK</sub>	350	W
Peak pulse current ( t <sub>p</sub> = 8/20 us)	I <sub>pp</sub>	19	A
Operating junction temperature range	T <sub>J</sub>	-55 to +125	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C
Soldering temperature, t <sub>max</sub> = 10s	T <sub>L</sub>	260	°C

**ELECTRICAL CHARACTERISTICS**

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX	UNIT
Reverse stand-off voltage	V <sub>RWM</sub>	--	--	--	3.3	V
Breakdown voltage	V <sub>BR</sub>	I <sub>t</sub> = 1 mA	4.0	--	--	V
Reverse leakage current	I <sub>RM</sub>	V <sub>DRM</sub> = 3.3 V	--	--	4.5	uA
Junction capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHz	--	0.7	0.8	pF
Clamping voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20 uS	--	--	7	V
		I <sub>PP</sub> = 19A, t <sub>p</sub> = 8/20 uS	--	--	18.5	

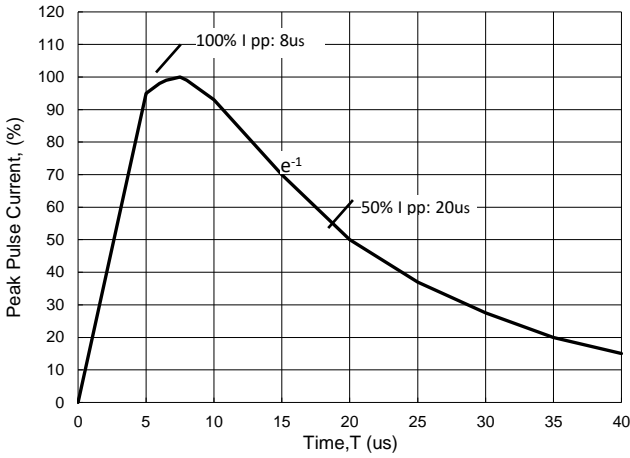
**Notes:**

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.

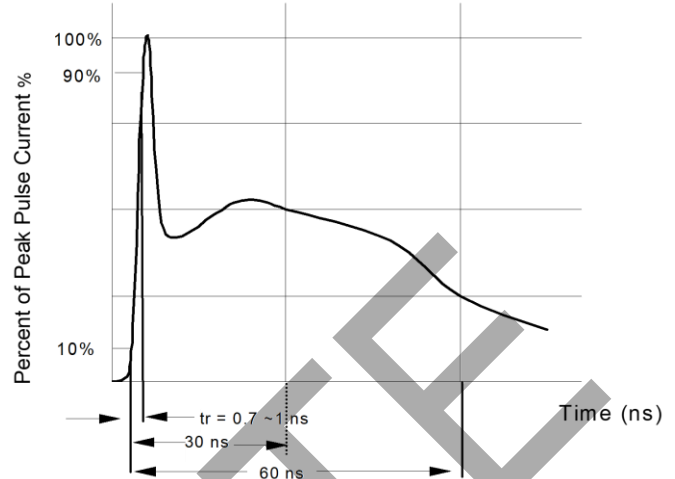
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**RATING AND CHARACTERISTIC CURVES**  
**L35L3V3CB2**

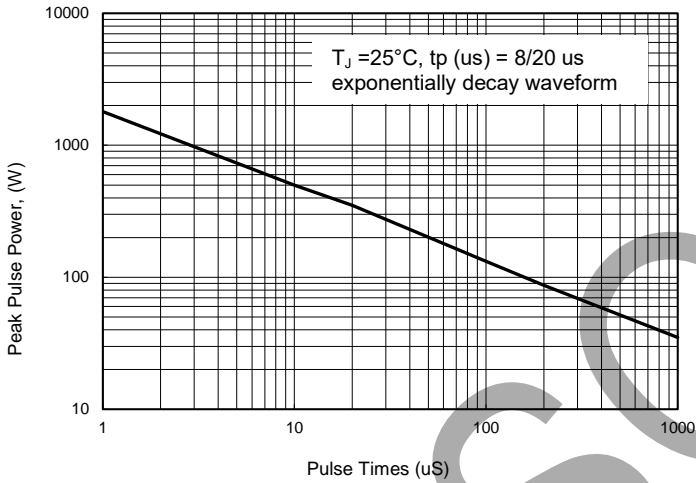
**FIG.1- 8/20us pulse waveform according to IEC 61000-4-5**



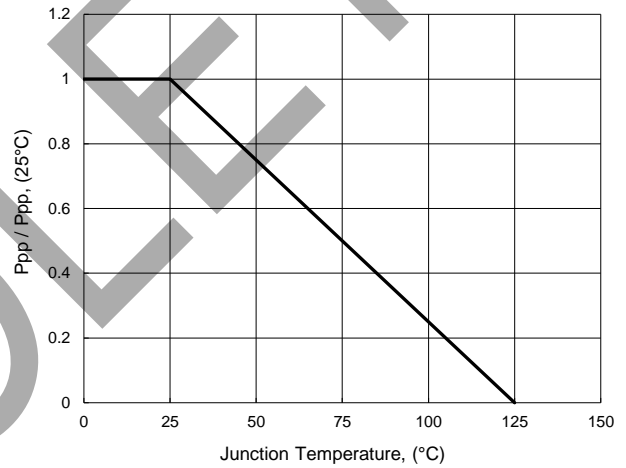
**FIG.2- ESD pulse waveform according to IEC 61000-4-2**



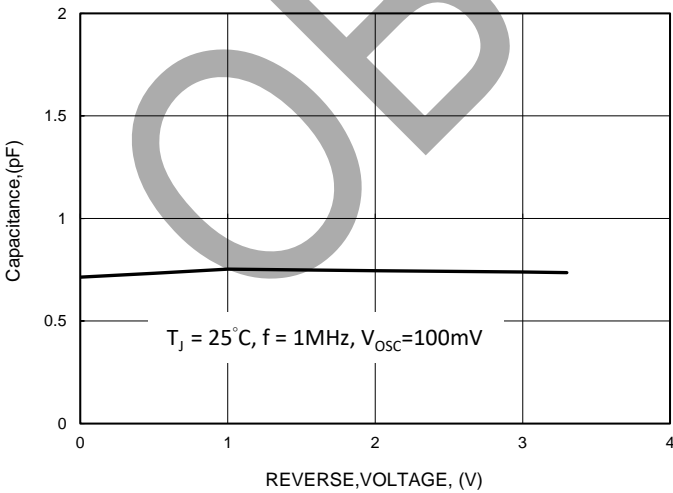
**Figure 3. Power Dissipation versus Pulse Time**



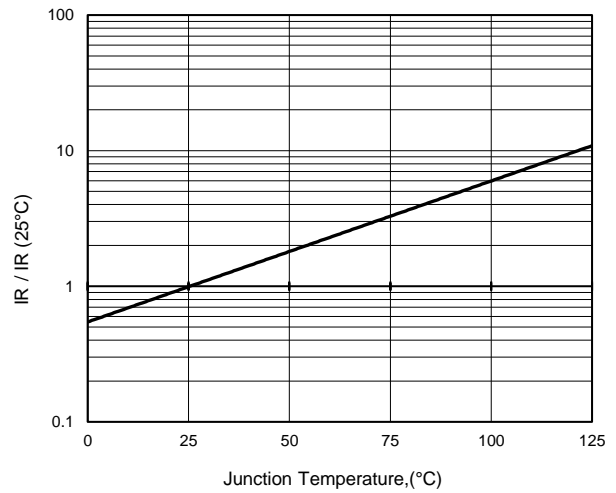
**FIG.4- peak pulse power versus TJ**



**Figure 5. Typical Junction Capacitance**



**Figure 6. Reverse Leakage Current versus TJ**



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**Ordering Information:**

Part Number	Package	Packing	
		Qty.	Carrier
L35L3V3CB2	SOD-323	3000pcs	Reel

**Marking Information:**

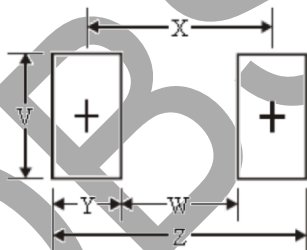


GO 9 = Product Type Marking Code

**Packaging Information:**

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
L35L3V3CB2	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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