

**ESD PROTECTION DEVICE**

**STAND-OFF VOLTAGE - 5.0 Volts  
POWER DISSIPATION - 250 Watts**

**FEATURES**

- Protects one power or I/O line.
- Max. peak pulse power :  $P_{PP} = 250W$  at  $t_p = 8/20$  us.
- Ultra low capacitance: 2.0pF typical.
- Low clamping voltage.
- IEC 61000-4-2,  $>\pm 25KV$  (air);  $>\pm 25KV$  (contact)
- IEC 61000-4-2, level 4 (ESD),  $>\pm 15KV$  (air) ;  $>\pm 8KV$  (contact)
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

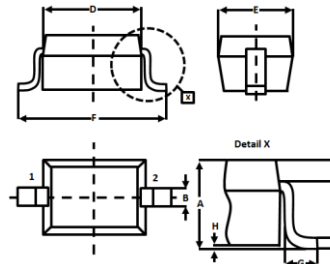
**MECHANICAL DATA**

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

**APPLICATION**

- Ethernet – 10/100/1000 base T
- Audio phone jack
- Handheld – wireless systems
- USB interface

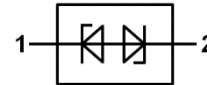
**SOD-323**



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 ( $t_p = 8/20$ us)	$P_{PK}$	250	W
Peak pulse current ( $t_p = 8/20$ us)	$I_{pp}$	17	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

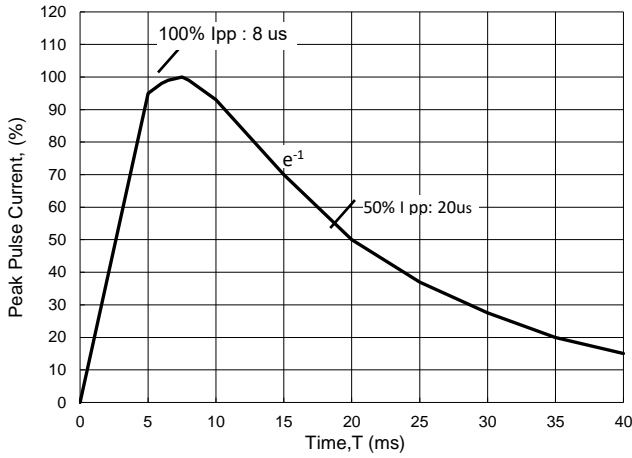
**ELECTRICAL CHARACTERISTICS**

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX	UNIT
Reverse stand-off voltage	$V_{RWM}$	--	--	--	5.0	V
Breakdown voltage	$V_{BR}$	$I_R = 1$ mA	6.0	--	8.0	V
Reverse leakage current	$I_{RM}$	$V_{DRM} = 5$ V	--	--	5	uA
Junction capacitance	$C_J$	$V_R = 0V, f = 1MHz$	--	2.0	3.5	pF
Clamping voltage	$V_C$	$I_{PP} = 1A, t_p = 8/20$ uS	--	--	9.8	V
		$I_{PP} = 17A, t_p = 8/20$ uS	--	--	15	

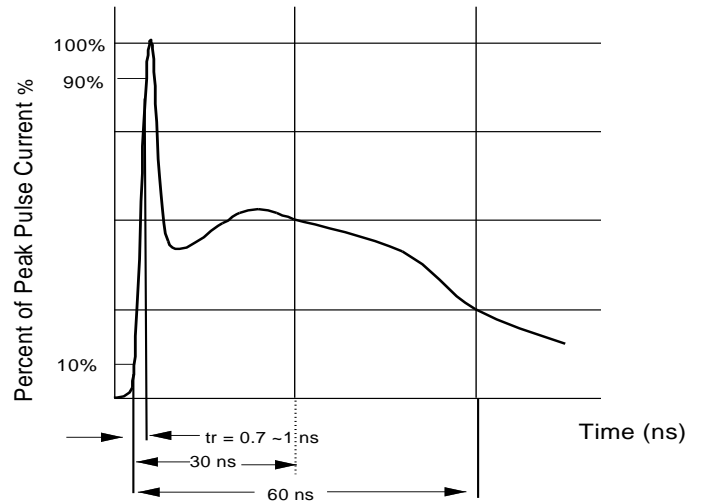
- Notes:**
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
  2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  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  
L25L5V0CB2**

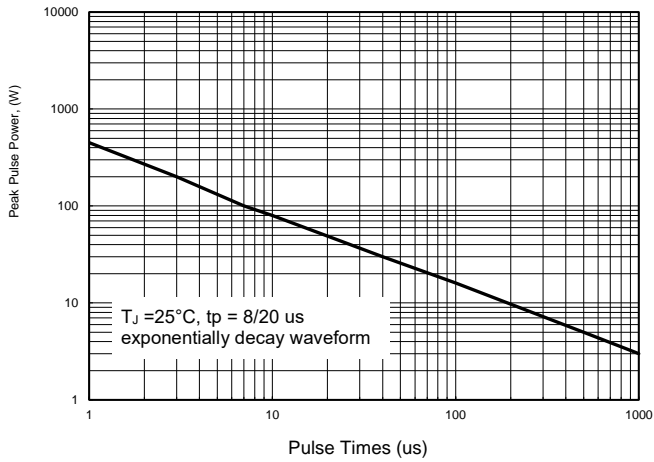
**FIG.1- 8/20us pulse waveform according to IEC 61000-4-5**



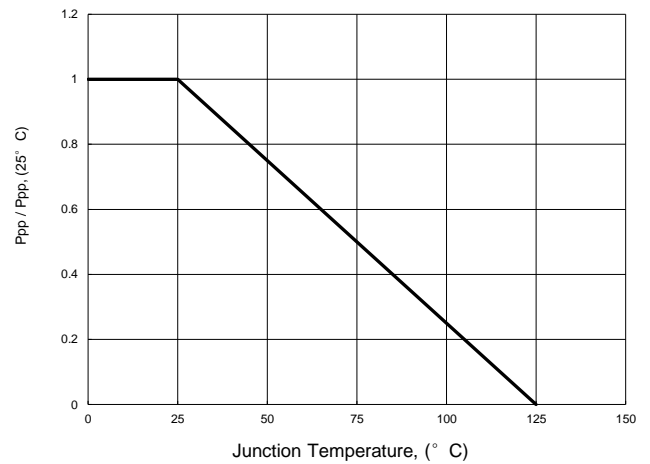
**FIG.2- ESD pulse waveform according to IEC 61000-4-2**



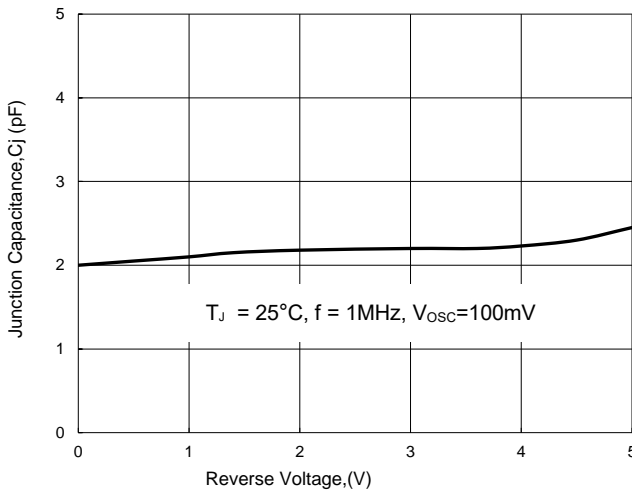
**FIG.3- power dissipation versus pulse time**



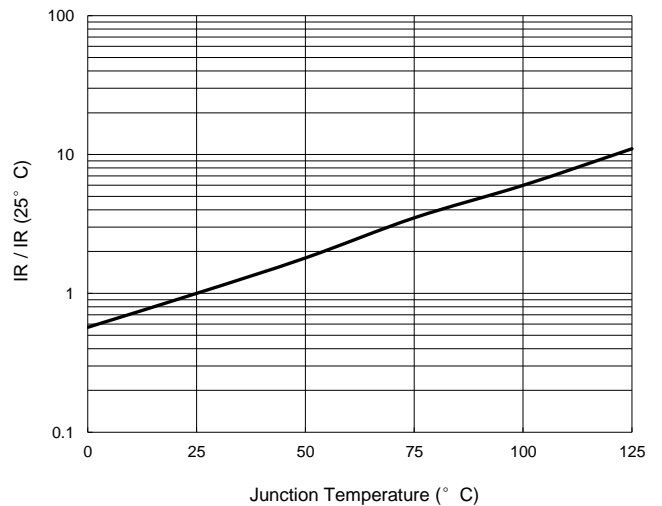
**FIG.4- peak pulse power versus Tj**



**FIG.5- typical junction capacitance**



**FIG.6- reverse leakage current versus Tj**



### Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
L25L5V0CB2	SOD-323	3000pcs	Reel

### Marking Information :

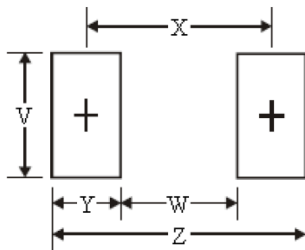


D I Q = Product Type Marking Code

### Packaging Information :

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
L25L5V0CB2	3000	7	45000	90K/180K

### 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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