

ESD PROTECTION DEVICE
STAND-OFF VOLTAGE - 5.0 Volts
POWER DISSIPATION - 250 Watts
FEATURES

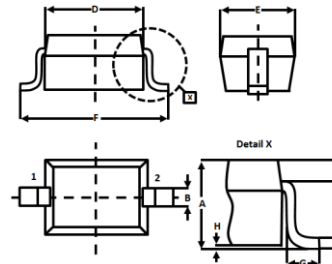
- Protects one power or I/O line.
- Max. peak pulse power : $P_{PP} = 250W$ at $t_p = 8/20$ us.
- Ultra low capacitance: 2.0pF typical.
- Low clamping voltage.
- IEC 61000-4-2, $>\pm 25KV$ (air); $>\pm 25KV$ (contact)
- IEC 61000-4-2, level 4 (ESD), $>\pm 15KV$ (air) ; $>\pm 8KV$ (contact)
- **Totally 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

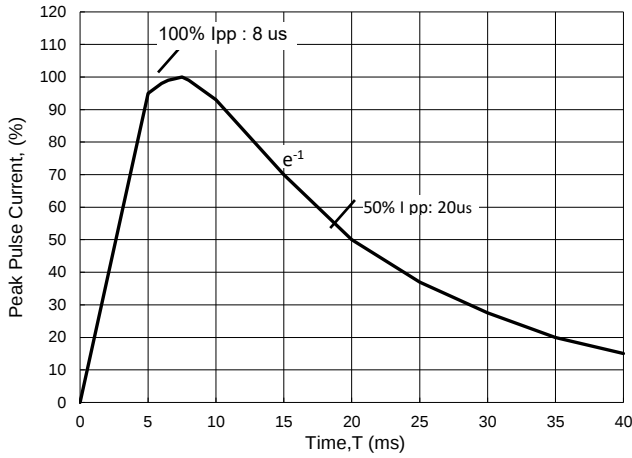


FIG.2- ESD pulse waveform according to IEC 61000-4-2

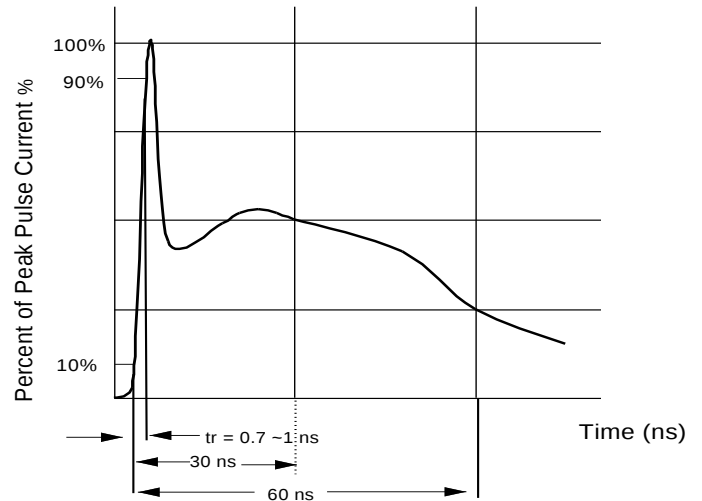


FIG.3- power dissipation versus pulse time

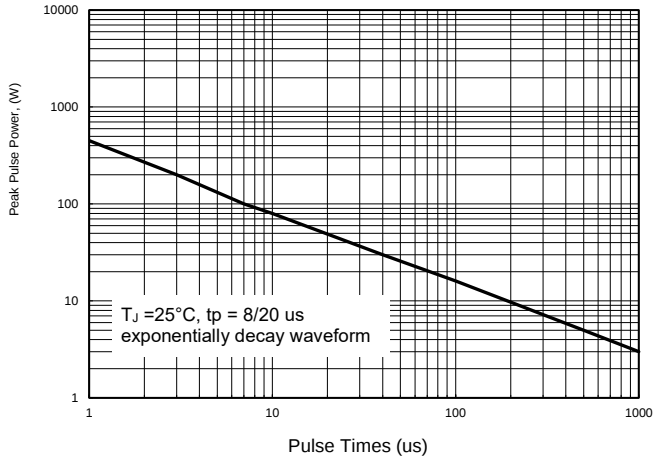


FIG.4- peak pulse power versus Tj

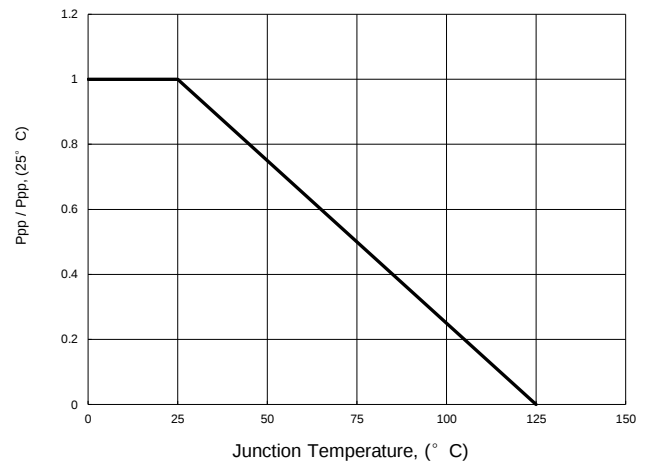


FIG.5- typical junction capacitance

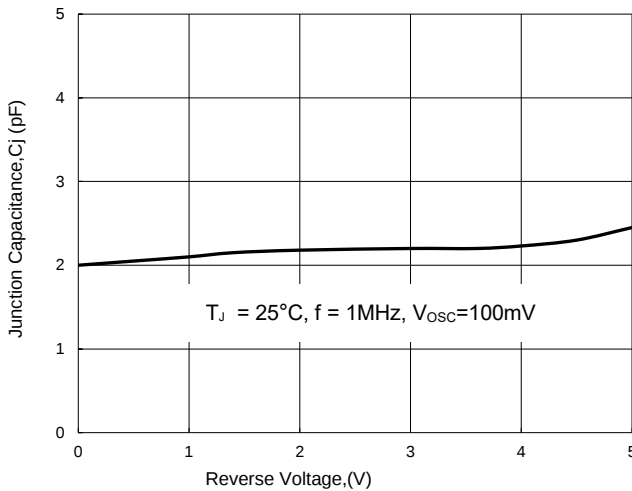
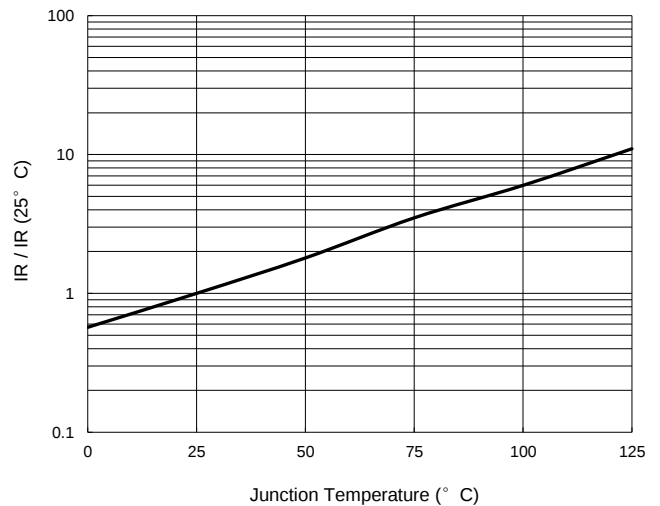


FIG.6- reverse leakage current versus Tj



Ordering Information :

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

Marking Information :

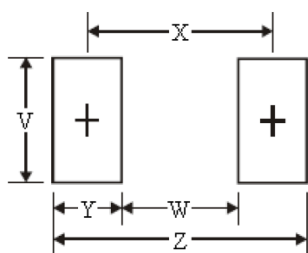


D I Q = Product Type Marking Code

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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