

ESD PROTECTION DEVICE

**STAND-OFF VOLTAGE – 5.0 Volts
POWER DISSIPATION - 500 Watts**

FEATURES

- Protects one power or I/O line
- Max. peak pulse power : P_{pp} = 500W at t_p = 8/20 us
- Ultra Low Capacitance : 2.7pF Typical
- Low clamping voltage
- IEC 61000-4-2, level 4 (ESD), > ±30KV (air) ; > ±30KV (contact)
- IEC 61000-4-2, 25A(8/20 us)
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**

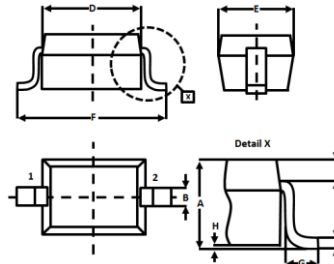
MECHANICAL DATA

- 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-B/02.
- Moisture Sensitivity: Leve 1 per J-STD-020C
- Component in accordance to RoHs 2011/65/EU

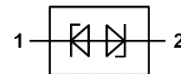
APPLICATION

- Audio phone jacks
- Handheld - wireless systems
- USB interfaces

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}	500	W
Peak pulse current (t _p = 8/20us)	I _{pp}	25	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 _T = 1 mA	6.8	--	9.0	V
Reverse leakage current	I _{RM}	V _{DRM} = 5 V	--	--	5.0	uA
Junction capacitance	C _J	V _R = 0V, f = 1MHz	--	2.7	3.5	pF
Clamping voltage	V _C	I _{PP} = 1A, t _p = 8/20us	--	--	9.5	V
		I _{PP} = 25A, t _p = 8/20us	--	--	20.0	

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
L50L5V0CB2**

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

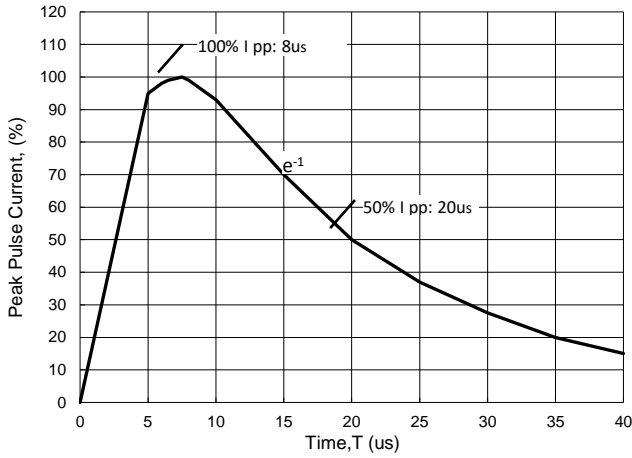


FIG.2- ESD pulse waveform according to IEC 61000-4-2

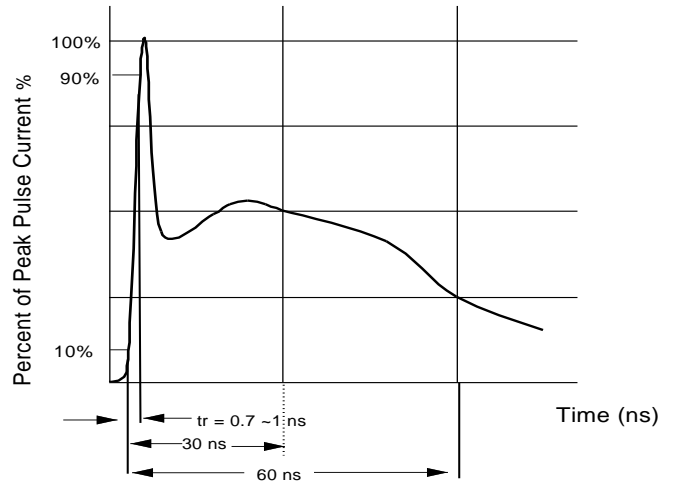


Figure 3. Power Dissipation versus Pulse Time

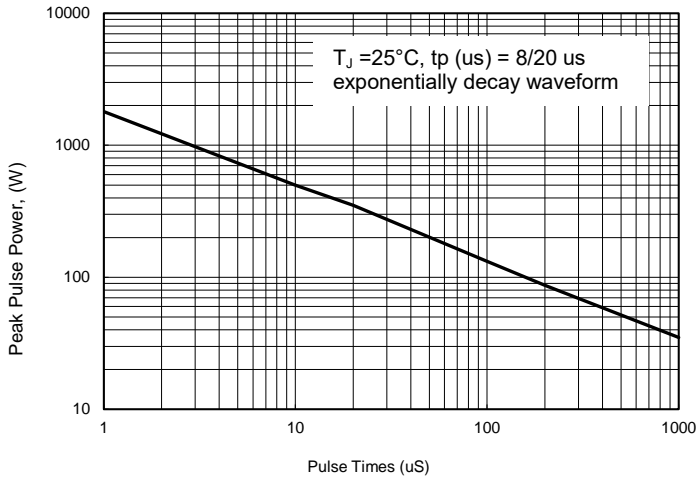


FIG.4- peak pulse power versus Tj

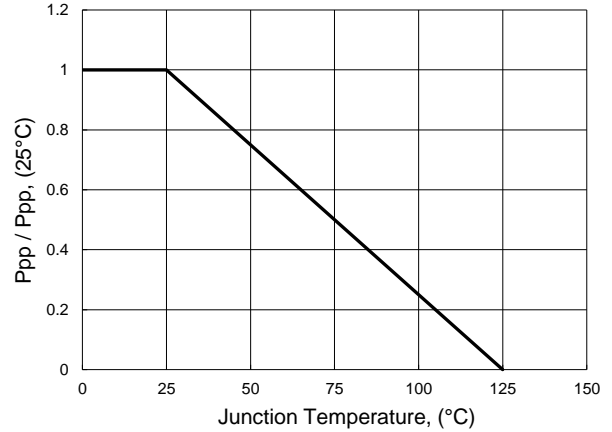


FIG.5- Typical Junction Capacitance

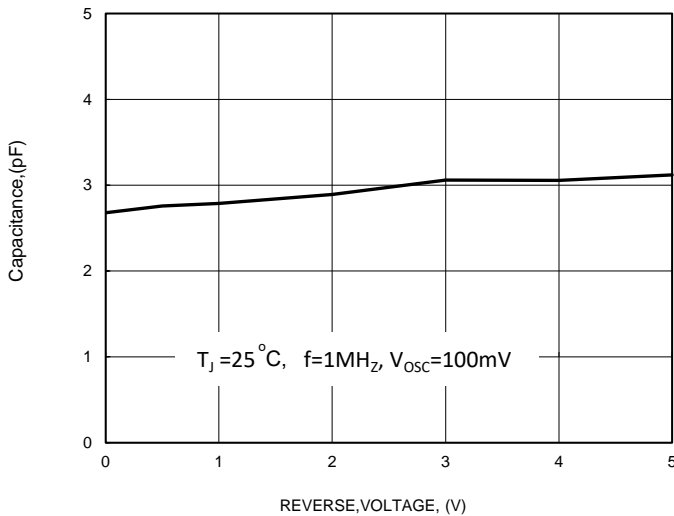
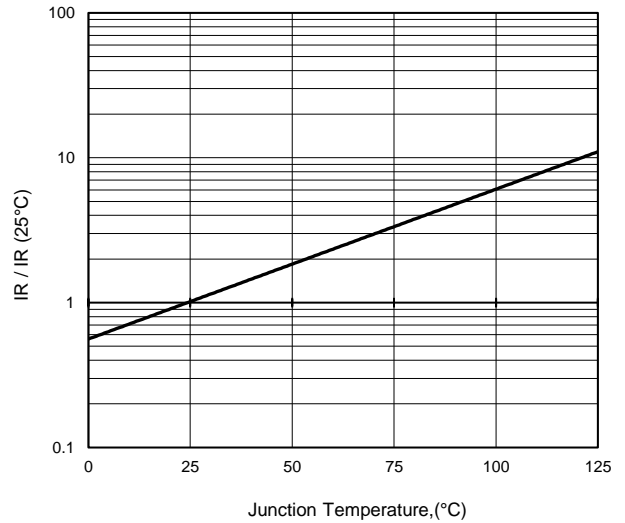


Figure 6. Reverse Leakage Current versus TJ



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
L50L5V0CB2	SOD-323	3000pcs	Reel

Marking Information :

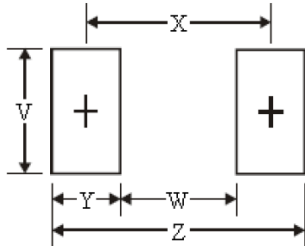


DHC = Product Type Marking Code

Packaging Information :

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
L50L5V0CB2	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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