

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_{pp} = 350W at t_p = 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)**

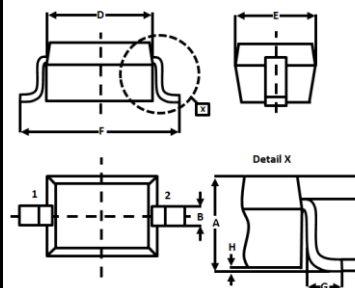
MECHANICAL DATA

- 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

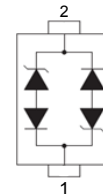
- Ethernet - 10/100/1000 Base T
- Handheld - wireless systems
- USB interfaces

SOD-323



| 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} | 350 | W |
| Peak pulse current (t _p = 8/20 us) | I _{PP} | 19 | 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} | -- | -- | -- | 3.3 | V |
| Breakdown voltage | V _{BR} | I _t = 1 mA | 4.0 | -- | -- | V |
| Reverse leakage current | I _{RM} | V _{DRM} = 3.3 V | -- | -- | 4.5 | uA |
| Junction capacitance | C _J | V _R = 0V, f = 1MHz | -- | 0.7 | 0.8 | pF |
| Clamping voltage | V _C | I _{PP} = 1A, t _p = 8/20 uS | -- | -- | 7 | V |
| | | I _{PP} = 19A, t _p = 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.

RATING AND CHARACTERISTIC CURVES
L35L3V3CB2

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

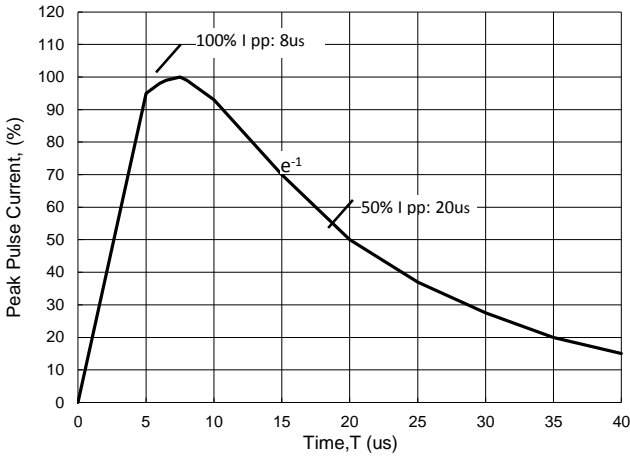


FIG.2- ESD pulse waveform according to IEC 61000-4-2

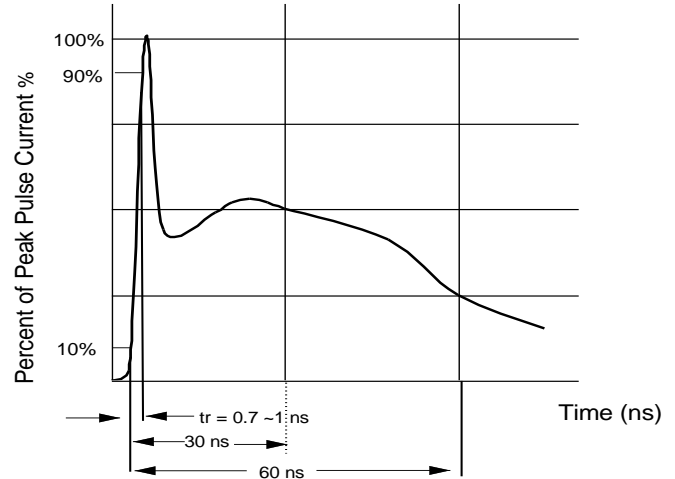


Figure 3. Power Dissipation versus Pulse Time

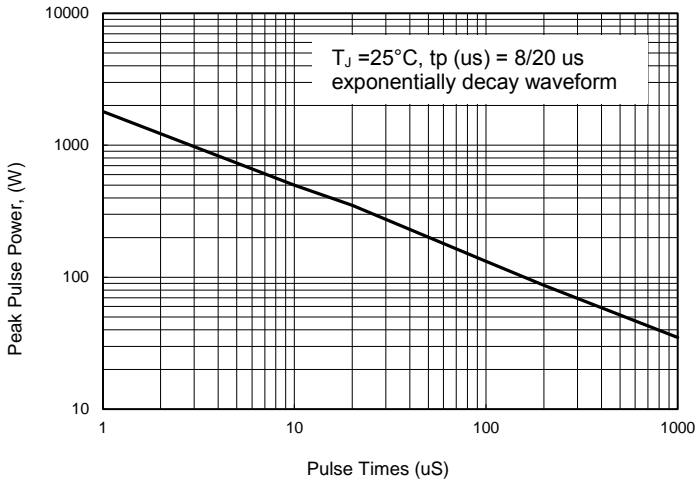


FIG.4- peak pulse power versus TJ

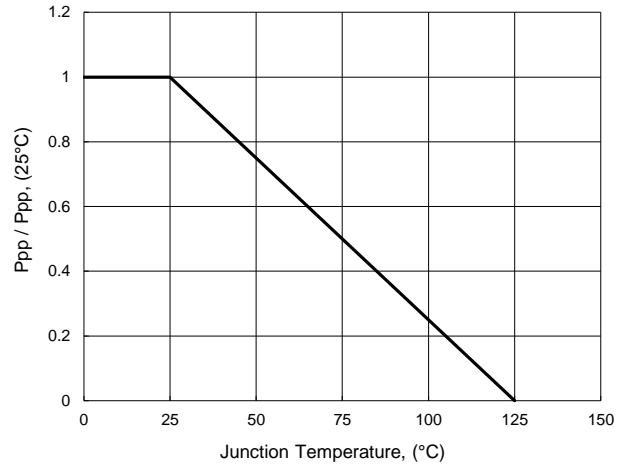


Figure 5. Typical Junction Capacitance

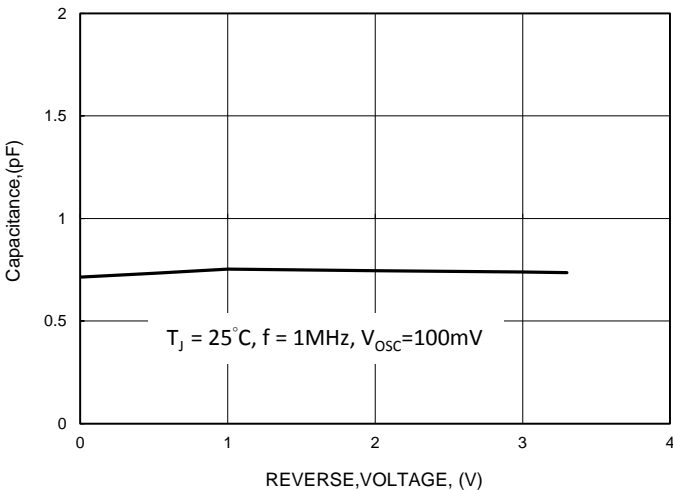
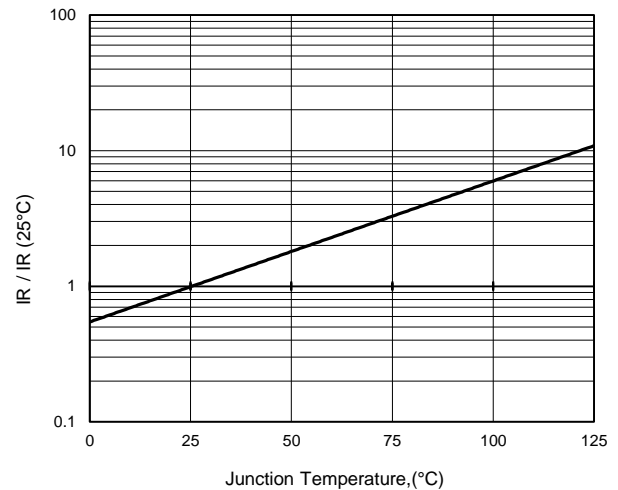


Figure 6. Reverse Leakage Current versus TJ



Ordering Information:

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

Marking Information:

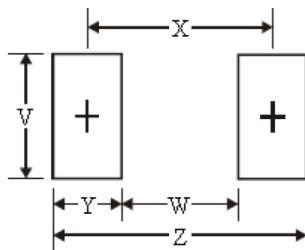


GO 9 = Product Type Marking Code

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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