

Features

1. The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
2. For surface mounted applications
3. Metal silicon junction, majority carrier conduction
4. Low power loss, high efficiency
5. Built-in strain relief, ideal for automated placement
6. High forward surge current capability
7. High temperature soldering guaranteed:
260°C/10 seconds at terminals

Mechanical Data

Case : JEDEC DO-201AD Molded plastic body

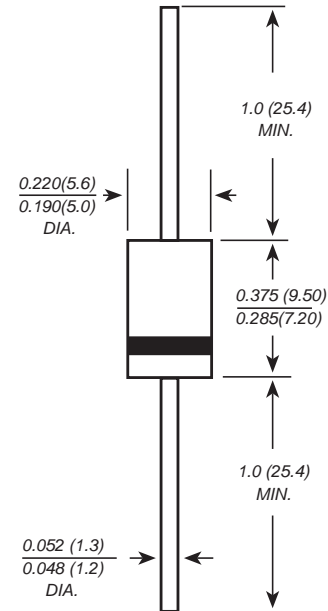
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.04ounce, 1.10 grams

DO-201AD



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter | SYMBOLS | ST540L | ST560L | ST510L | UNITS |
|---|--------------------------------|-------------|--------|-------------|-------|
| | | ST540L | ST560L | ST510L | |
| Marking Code | | ST540L | ST560L | ST510L | |
| Maximum repetitive peak reverse voltage | V _{RRM} | 40 | 60 | 100 | V |
| Maximum RMS voltage | V _{RMS} | 28 | 42 | 70 | V |
| Maximum DC blocking voltage | V _{DC} | 40 | 60 | 100 | V |
| Maximum average forward rectified current at TL (see fig. 1) | I <sub(av)< sub=""></sub(av)<> | 5.0 | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 100 | 60.0 | 90.0 | A |
| Maximum instantaneous forward voltage at 5.0A | V _F | 0.43 | 0.50 | 0.60 | V |
| Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =125°C | I _R | 0.10 | 0.05 | 0.03 | mA |
| | | 20.0 | | 10.0 | |
| Typical junction capacitance (NOTE 1) | C _J | 500 | 400 | | pF |
| Typical thermal resistance (NOTE 2) | R _{θJA} | 25.0 | | | °C/W |
| Operating junction temperature range | T _J | -55 to +125 | | -55 to +150 | °C |
| Operating storage temperature range | T _{STG} | -55 to +150 | | | °C |

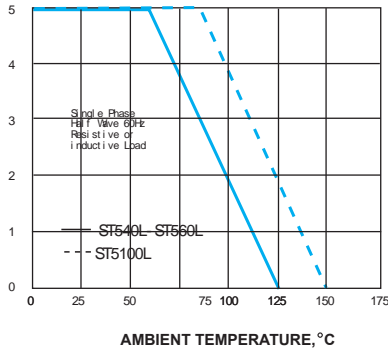
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Ratings And Characteristic Curves

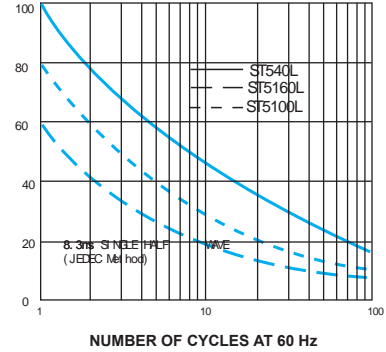
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



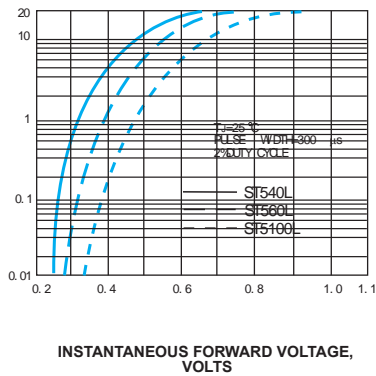
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



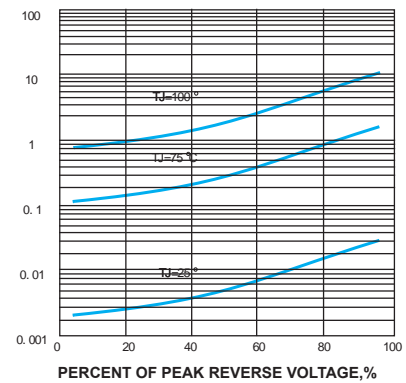
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



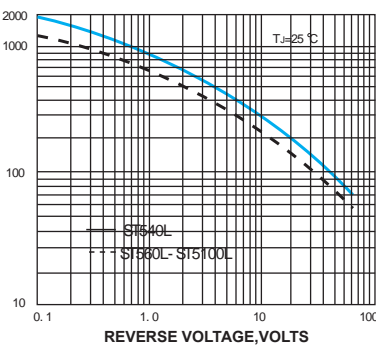
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



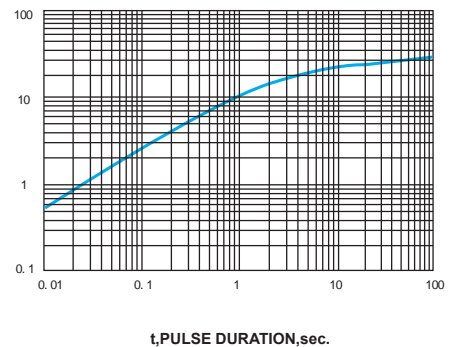
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



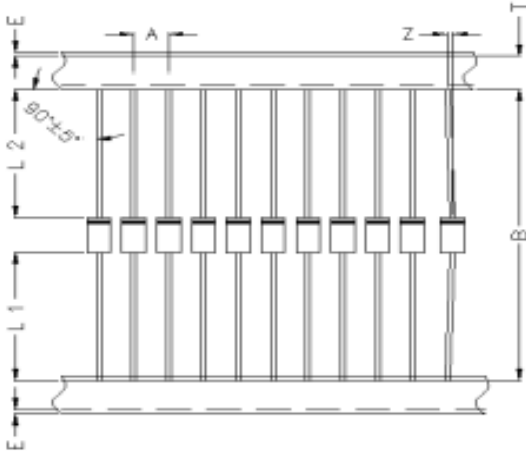
TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Package Information

Taping Specifications



| Item | Symbol | Specifications(mm) |
|---------------------|--------|--------------------|
| Component Pitch | A | 10.0±0.5 |
| Inner Tape Pitch | B | 52.4±1.5 |
| Component alignment | Z | 1.2 Max |
| Tape width | T | 6.0±0.5 |
| Exposed adhesive | E | 0.8 Max |
| Body eccentricity | L1-L2 | 1.0 Max |

Ammunition Package Specifications

| Package | Inner Box Size (mm) | QTY/Box (pcs) | Carton Size (mm) | Q'TY/Carton (pcs) |
|------------|---------------------|---------------|------------------|-------------------|
| DO - 201AD | 255*74*145 | 1000 | 410*275*340 | 10000 |

Bulk Package Specifications

| Package | Inner Box Size (mm) | QTY/Box (pcs) | Carton Size (mm) | Q'TY/Carton (pcs) |
|------------|---------------------|---------------|------------------|-------------------|
| DO - 201AD | 198*86*21 | 200 | 460*220*250 | 10000 |