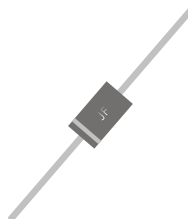
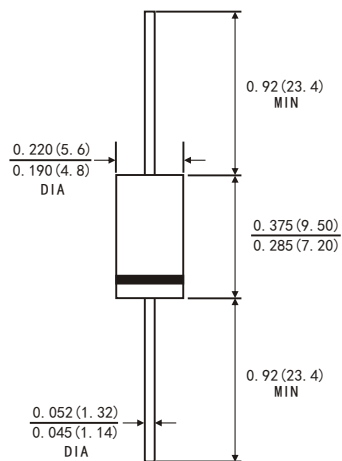


## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



## DO-201AD



## MECHANICAL DATA

- Case: JEDEC DO-201AD molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 0.041ounce, 1.15 grams

## TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

| PRIMARY CHARACTERISTICS                     |         |
|---------------------------------------------|---------|
| I <sub>F(AV)</sub>                          | 5.0A    |
| V <sub>RRM</sub>                            | 40V/45V |
| I <sub>FSM</sub>                            | 120A    |
| V <sub>F</sub> at I <sub>F</sub> =5.0A,125℃ | 0.38V   |
| T <sub>JMAX</sub>                           | 150℃    |

## MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified )

| Parameter                                                                                                    | Symbol             | SRT540L SRT545L |         | Unit |
|--------------------------------------------------------------------------------------------------------------|--------------------|-----------------|---------|------|
|                                                                                                              |                    | SRT540L         | SRT545L |      |
| Maximum repetitive peak reverse voltage                                                                      | V <sub>RRM</sub>   | 40              | 45      | V    |
| Maximum average forward rectified current<br>0.375"(9.5mm) lead length(see fig.1)                            | I <sub>F(AV)</sub> | 5.0             |         | A    |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL) | I <sub>FSM</sub>   | 80              |         | A    |
| Operating junction temperature range                                                                         | T <sub>J</sub>     | -55 to+150      |         | ℃    |
| Storage temperature range                                                                                    | T <sub>stg</sub>   | -55 to+150      |         | ℃    |

## RATINGS AND CHARACTERISTIC OF SRT540L、SRT545L

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C Unless otherwise noted)

| Parameter                     | Test Conditions         |                       | Symbol                       | TYP. | MAX. | Unit |
|-------------------------------|-------------------------|-----------------------|------------------------------|------|------|------|
| Instantaneous forward voltage | I <sub>F</sub> =5.0A    | T <sub>A</sub> =25°C  | V <sub>F</sub> <sup>1)</sup> | 0.45 | 0.47 | V    |
|                               |                         | T <sub>A</sub> =100°C |                              | 0.40 | –    |      |
|                               |                         | T <sub>A</sub> =125°C |                              | 0.38 | –    |      |
|                               | I <sub>F</sub> =3.0A    | T <sub>A</sub> =25°C  |                              | 0.41 | –    |      |
|                               |                         | T <sub>A</sub> =100°C |                              | 0.35 | –    |      |
|                               |                         | T <sub>A</sub> =125°C |                              | 0.31 | –    |      |
| Reverse current               | V <sub>R</sub> =40V/45V | T <sub>A</sub> =25°C  | I <sub>R</sub> <sup>2)</sup> | 80   | 200  | μA   |
|                               |                         | T <sub>A</sub> =100°C |                              | 8    | –    | mA   |
|                               |                         | T <sub>A</sub> =125°C |                              | 20   | –    |      |
| Typical junction capacitance  | 4V, 1MHz                |                       | C <sub>J</sub>               | 240  |      | pF   |

Notes: 1.Pulse test: 300 μs pulse width, 1% duty cycle

2.Pulse test: pulse width ≤ 40ms

### THERMAL CHARACTERISTICS (T<sub>A</sub>=25°C Unless otherwise noted)

| Parameter                                | Symbol           | SRT540L、SRT545L | Unit |
|------------------------------------------|------------------|-----------------|------|
| Typical thermal resistance <sup>3)</sup> | R <sub>θJA</sub> | 25.0            | °C/W |
|                                          | R <sub>θJL</sub> | 8.0             |      |

3.Thermal resistance from junction to lead vertical P.C.B. mounted, 0.375"(9.5mm) lead length

### AVAILABLE PACK INFORMATION

| Product code     | Pack | Box Size L*W*H(mm) | Quantity (pcs/box) | Carton Size L*W*H(mm) | Quantity (box/carton) |
|------------------|------|--------------------|--------------------|-----------------------|-----------------------|
| SRT540L-DO-201AD | B/P  | 190*80*21          | 200                | 433*203*230           | 50                    |
| SRT540L-DO-201AD | T/B  | 264*74*135         | 1000               | 400*267*286           | 10                    |
| SRT545L-DO-201AD | B/P  | 190*80*21          | 200                | 433*203*230           | 50                    |
| SRT545L-DO-201AD | T/B  | 264*74*135         | 1000               | 400*267*286           | 10                    |

# RATINGS AND CHARACTERISTIC OF SRT540L, SRT545L

FIG.1-FORWARD CURRENT DERATING CURVE

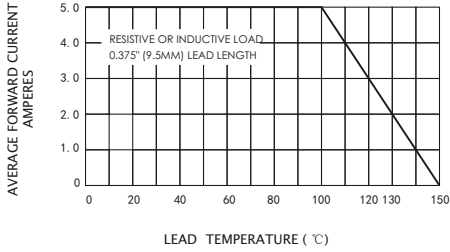


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

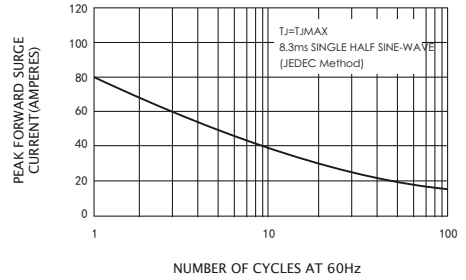


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

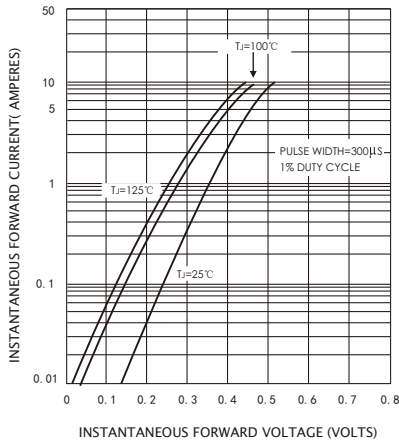


FIG.4-TYPICAL REVERSE CHARACTERISTICS

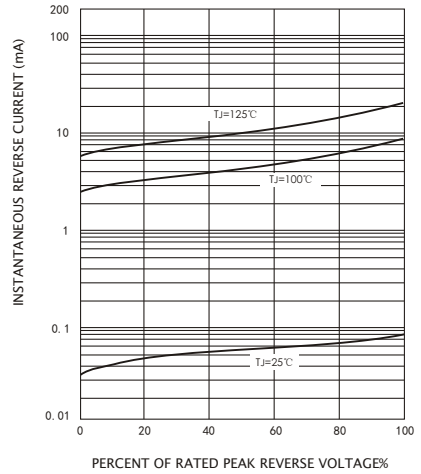


FIG.5-TYPICAL JUNCTION CAPACITANCE

