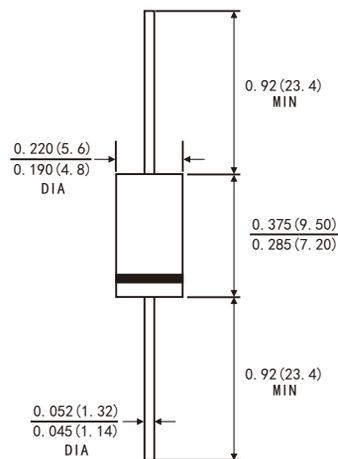


FEATURES

- 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°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



DO-201AD



Dimensions in inches and (millimeters)

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 | |
|-------------------------|-------|
| $I_{F(AV)}$ | 5.0A |
| V_{RRM} | 100V |
| I_{FSM} | 150A |
| V_F at $I_F=5.0A$ | 0.53V |
| T_{JMAX} | 150°C |

MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|-------------|-------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 100 | V |
| Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1) | $I_{F(AV)}$ | 5.0 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL) | I_{FSM} | 150 | A |
| Operating junction temperature range | T_J | -55 to+ 150 | °C |
| Storage temperature range | T_{stg} | -55 to+ 150 | °C |

RATINGS AND CHARACTERISTIC OF SR5100UL

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

| Parameter | Test Conditions | | Symbol | TYP. | MAX. | Unit |
|-------------------------------|-----------------------|-----------------------|------------------------------|------|------|------|
| Instantaneous forward voltage | T _J =25°C | I _F =5A | V _F ¹⁾ | 0.53 | 0.57 | V |
| | | I _F =2A | | 0.44 | – | |
| | | I _F =1A | | 0.40 | – | |
| | T _J =125°C | I _F =5A | | 0.47 | – | |
| | | I _F =2A | | 0.35 | – | |
| | | I _F =1A | | 0.28 | – | |
| Reverse current | V _R =100V | T _A =25°C | I _R ²⁾ | 15 | 50 | μA |
| | | T _A =100°C | | 2.5 | – | mA |
| | | T _A =125°C | | 10 | – | |
| Typical junction capacitance | 4V, 1MHz | | C _J | 520 | | pF |

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

2.Pulse test: pulse width ≤ 40ms

THERMAL CHARACTERISTICS

| Parameter | Symbol | DO-201AD | Unit |
|--|------------------|----------|------|
| Typical thermal resistance ³⁾ | R _{θJA} | 25.0 | °C/W |
| | R _{θJL} | 8.0 | |

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

AVAILABLE PACK INFORMATION

| Product code | Pack | Box Size L*W*H(mm) | Quantity(pcs/box) | Carton SizeL*W*H(mm) | Quantity(box/carton) |
|-------------------|------|--------------------|-------------------|----------------------|----------------------|
| SR5100UL-DO-201AD | B/P | 190*80*21 | 200 | 433*203*230 | 50 |
| SR5100UL-DO-201AD | T/B | 264*74*135 | 1000 | 400*267*286 | 10 |

RATINGS AND CHARACTERISTIC OF SR5100UL

FIG.1-FORWARD CURRENT DERATING CURVE

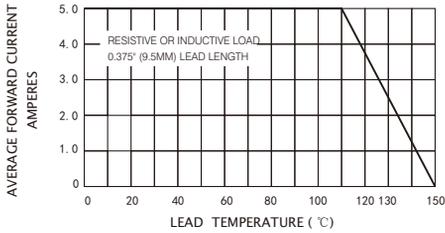


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

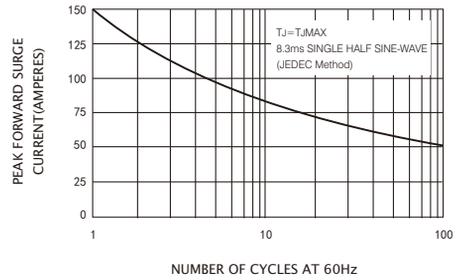


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

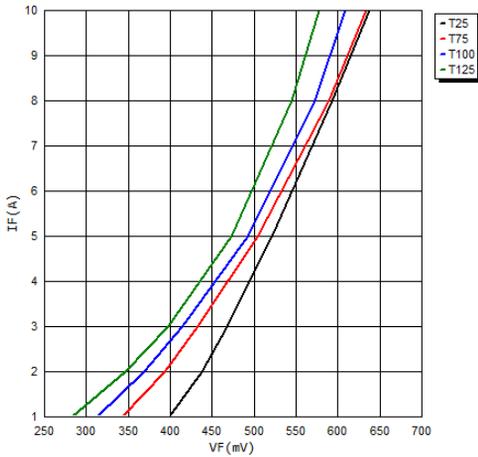


FIG.4-TYPICAL REVERSE CHARACTERISTICS

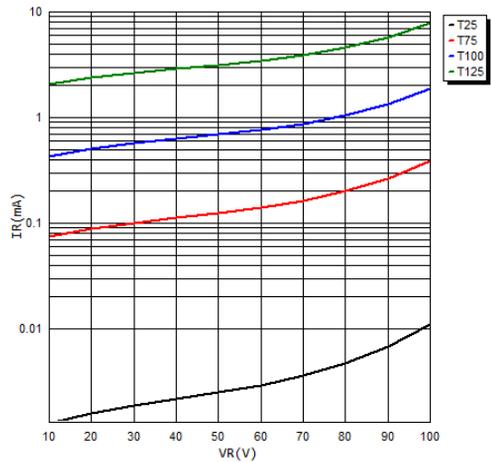


FIG.5-TYPICAL JUNCTION CAPACITANCE

