



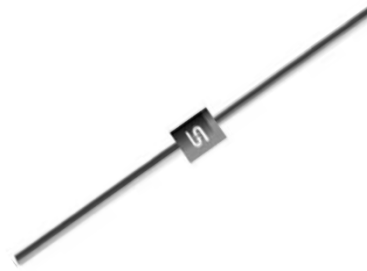
**THE DATASHEET OF
SR515 A0G**



Schottky Barrier Rectifier

FEATURES

- Low forward voltage drop
- Low power loss, high efficiency
- Guardring for overvoltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



DO-201AD



MECHANICAL DATA

Case: DO-201AD

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test,

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Weight: 1.1 g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | | | | | | | | | | |
|---|--------------------|--------------|--------|--------|--------|--------------|--------|--------|--------|--------|------|----|
| PARAMETER | SYMBOL | SR 502 | SR 503 | SR 504 | SR 505 | SR 506 | SR 509 | SR 510 | SR 515 | SR 520 | UNIT | |
| Maximum repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | 150 | 200 | V | |
| Maximum RMS voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 63 | 70 | 105 | 140 | V | |
| Maximum DC blocking voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | 90 | 100 | 150 | 200 | V | |
| Maximum average forward rectified current | I _{F(AV)} | 5 | | | | | | | | | A | |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 120 | | | | | | | | | A | |
| Maximum instantaneous forward voltage (Note 1) @ 5 A | V _F | 0.55 | | | 0.70 | | 0.85 | | 1.05 | | V | |
| Maximum reverse current @ rated VR T _J =25 °C T _J =100 °C T _J =125 °C | I _R | 0.5 | | | | | 0.1 | | | | | mA |
| | | 15 | | | 10 | | - | | | | | |
| | | - | | | - | | 5 | | 1 | | | |
| Voltage rate of change (Rated V _R) | dV/dt | 10000 | | | | | | | | | V/μs | |
| Typical thermal resistance | R _{θJC} | 6 | | | | | | | | | °C/W | |
| | R _{θJA} | 35 | | | | | | | | | | |
| Operating junction temperature range | T _J | - 55 to +125 | | | | - 55 to +150 | | | | | | °C |
| Storage temperature range | T _{STG} | - 55 to +150 | | | | | | | | | °C | |

Note 1: Pulse test with PW=300 μs, 1% duty cycle

ORDERING INFORMATION

| PART NO. | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING |
|-------------------|--------------------|--------------|---------------------|----------|------------------------|
| SR5xx (Note 1) | Prefix "H" | A0 | Suffix "G" | DO-201AD | 500 / Ammo box |
| | | R0 | | DO-201AD | 1,250 / 13" Paper reel |
| | | B0 | | DO-201AD | 500 / Bulk packing |
| | | X0 | | DO-201AD | Forming |

Note 1: "xx" defines voltage from 20V (SR502) to 200V (SR520)

EXAMPLE

| PREFERRED P/N | PART NO. | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION |
|---------------|----------|--------------------|--------------|---------------------|--------------------|
| SR506 A0 | SR506 | | A0 | | |
| SR506 A0G | SR506 | | A0 | G | Green compound |
| SR506HA0 | SR506 | H | A0 | | AEC-Q101 qualified |

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

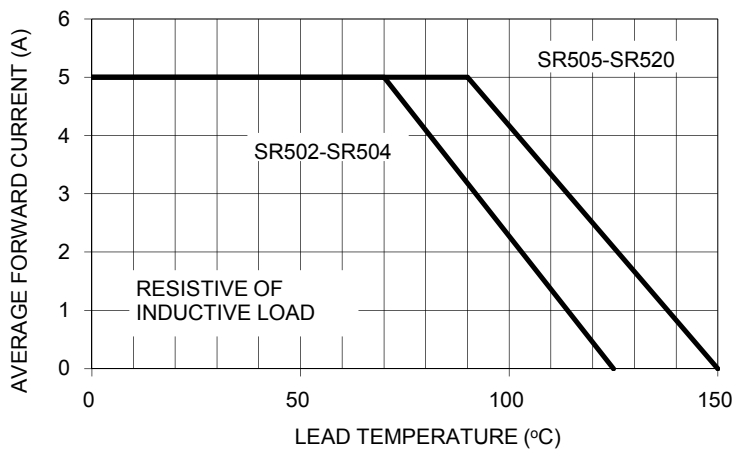


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

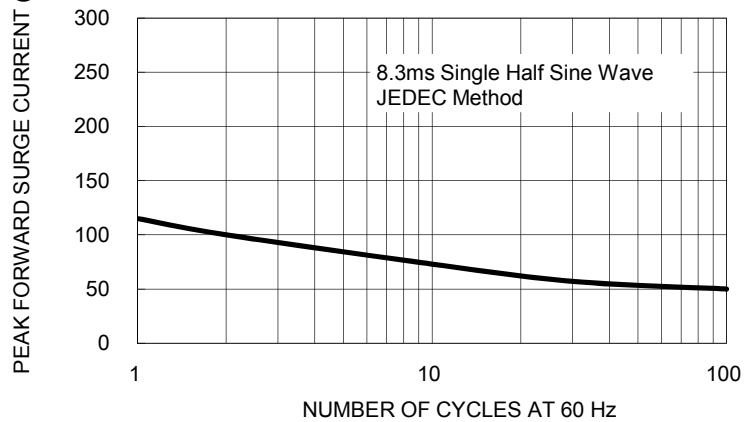


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

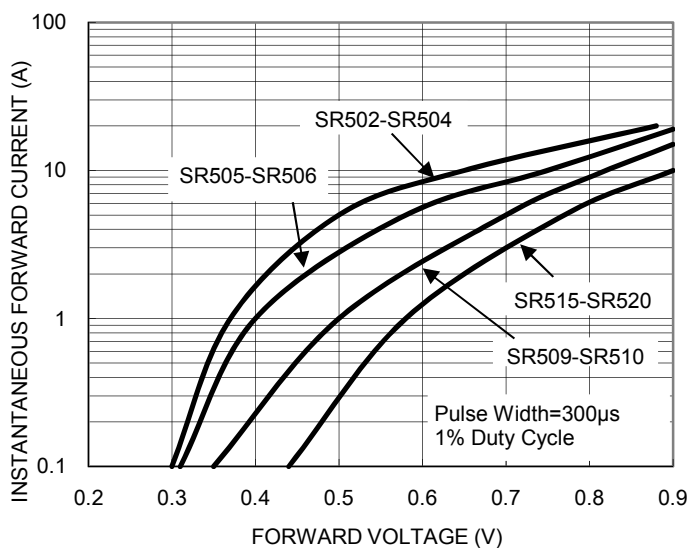


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

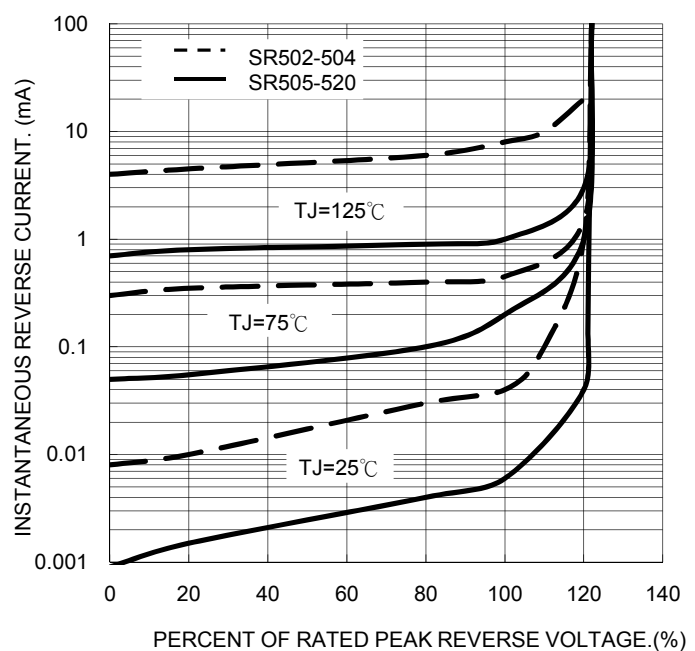


FIG. 5- TYPICAL JUNCTION CAPACITANCE

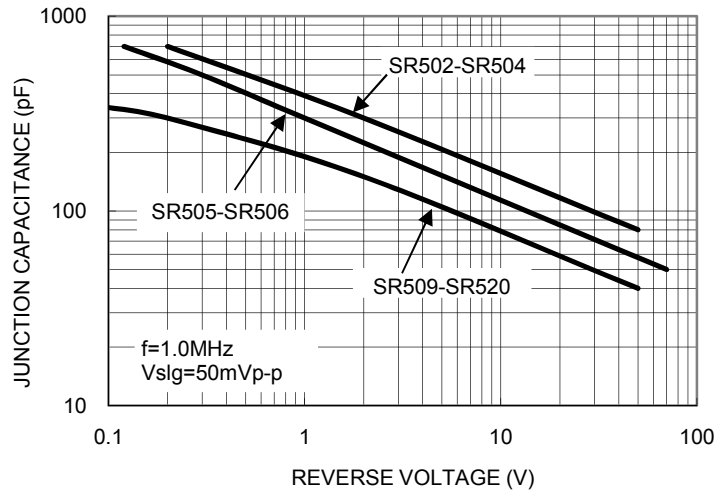
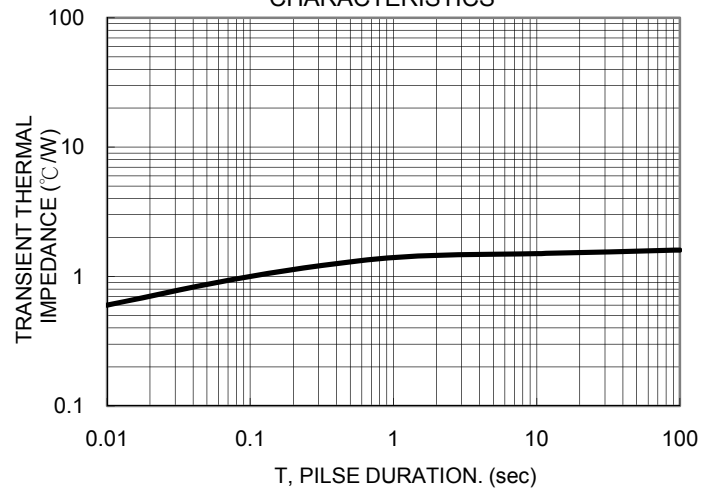
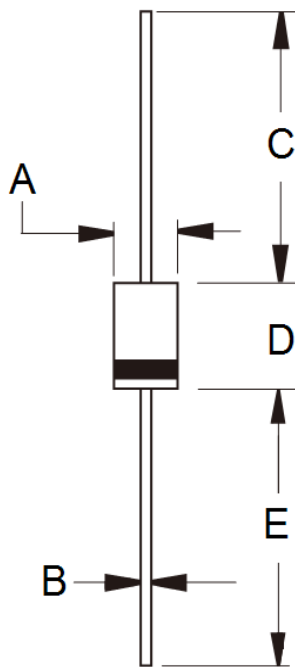


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|------|-------------|-------|
| | Min | Max | Min | Max |
| A | 5.00 | 5.60 | 0.197 | 0.220 |
| B | 1.20 | 1.30 | 0.048 | 0.052 |
| C | 25.40 | - | 1.000 | - |
| D | 8.50 | 9.50 | 0.335 | 0.375 |
| E | 25.40 | - | 1.000 | - |

MARKING DIAGRAM



P/N = Specific Device Code
 G = Green Compound
 YWW = Date Code
 F = Factory Code

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