

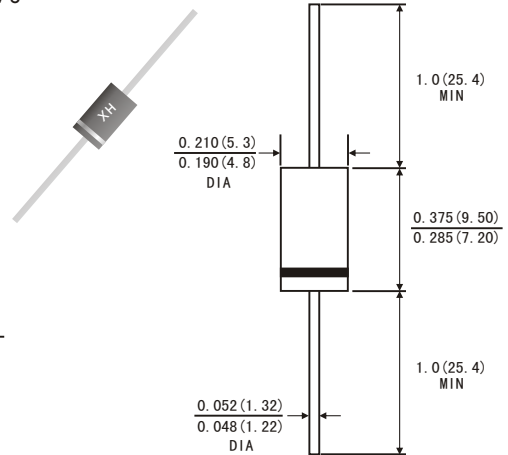
## FEATURES

- 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
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260 C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

## 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

## 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 ,resistive or inductive load. For capacitive load,derate by 20%.)

|  | Symbols          | 15SQ045                                | Units |
|--|------------------|--|-------|
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub> | 45                                     | Volts |
| Maximum RMS voltage  | V <sub>RMS</sub> | 32                                     | Volts |
| Maximum DC blocking voltage  | V <sub>DC</sub>  | 45                                     | Volts |
| Maximum average forward rectified current<br>0.375"(9.5mm) lead length(see fig.1)  | I(AV)            | 15.0                                   | Amps  |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T <sub>J</sub> )                        | I <sub>FSM</sub> | 150.0                                  | Amps  |
| Maximum instantaneous forward voltage at 15.0 A(Note 1)  | V <sub>F</sub>   | 0.55                                   | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)   | I <sub>R</sub>   | T <sub>A</sub> = 25 °C                 | 0.2   |
|  |                  | T <sub>A</sub> = 100 °C                | 50    |
| Typical junction capacitance(Note 3)   | C <sub>J</sub>   | 400                                    | pF    |
| Typical thermal resistance (Note 2)  | R <sub>θJC</sub> | 2.5                                    | °C/W  |
| Operating junction temperature range at reduced reverse voltage<br>VR <= 80%V <sub>RRM</sub><br>VR <= 50%V <sub>RRM</sub><br>in DC forward model | T <sub>J</sub>   | -65 to+150<br>-65 to+175<br>-65 to+200 | °C    |
| Storage temperature range  | T <sub>STG</sub> | -65 to+200                             | °C    |

- Notes: 1.Pulse test: 300μs pulse width,1% duty cycle  
2.Thermal resistance from junction to case  
3.Measured at 1MHz and reverse voltage of 4.0 volts

FIG.1-FORWARD CURRENT DERATING CURVE

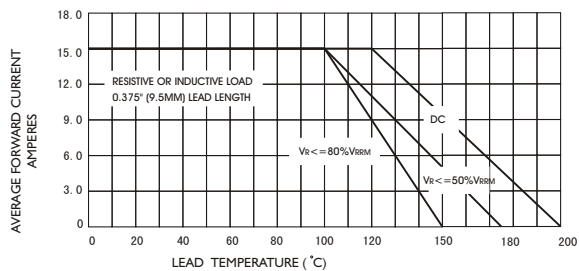


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

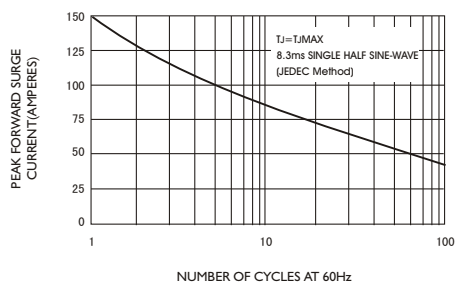


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

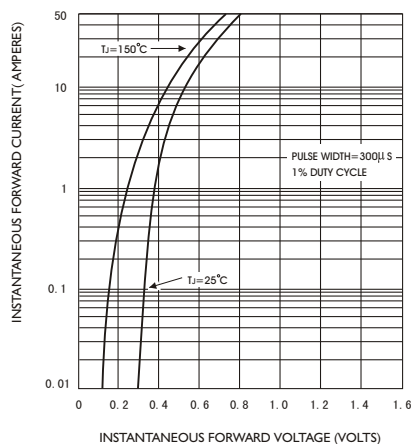


FIG.4-TYPICAL REVERSE CHARACTERISTICS

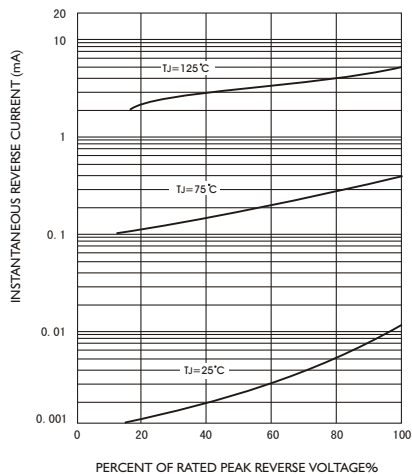


FIG.5-TYPICAL JUNCTION CAPACITANCE

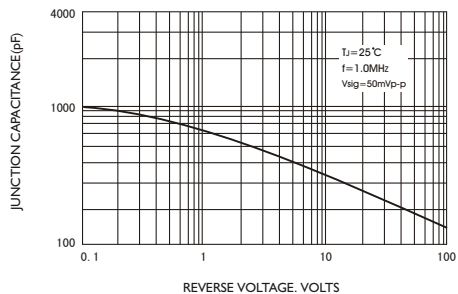


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

