

## 1SR139-100 ~ 1SR139-600

**PRV : 100 - 600 Volts**

**Io : 1.0 Ampere**

### FEATURES :

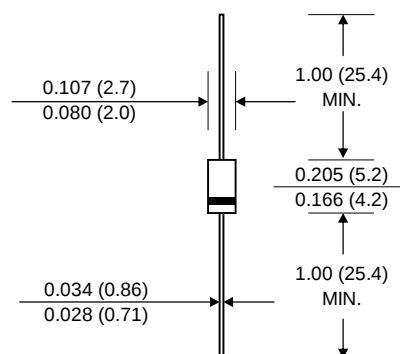
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.339 gram

## SILICON RECTIFIER DIODES

### DO - 41



Dimensions in inches and ( millimeters )

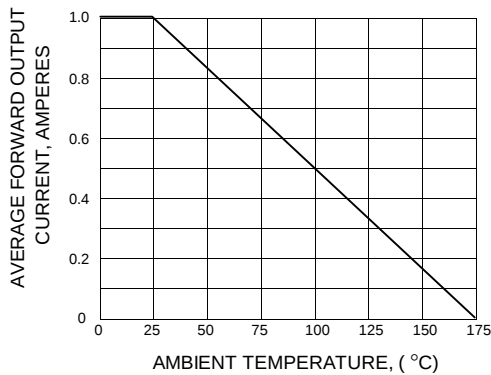
## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

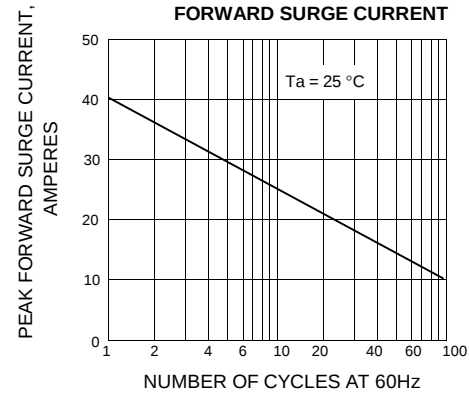
| RATING                                                                                                         | SYMBOL      | 1SR139-100    | 1SR139-200 | 1SR139-400 | 1SR139-600 | UNIT    |
|----------------------------------------------------------------------------------------------------------------|-------------|---------------|------------|------------|------------|---------|
| Maximum Repetitive Peak Reverse Voltage                                                                        | $V_{RRM}$   | 100           | 200        | 400        | 600        | V       |
| Maximum RMS Voltage                                                                                            | $V_{RMS}$   | 70            | 140        | 280        | 420        | V       |
| Maximum DC Blocking Voltage                                                                                    | $V_{DC}$    | 100           | 200        | 400        | 600        | V       |
| Maximum Average Forward Current<br>0.375"(9.5mm) Lead Length                                                   | $I_{F(AV)}$ | 1.0           |            |            |            | A       |
| Maximum Peak Forward Surge Current<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method) | $I_{FSM}$   | 40            |            |            |            | A       |
| Maximum Forward Voltage at $I_F = 1.0$ A                                                                       | $V_F$       | 1.1           |            |            |            | V       |
| Maximum DC Reverse Current at $V_R = V_{RRM}$                                                                  | $I_{RM}$    | 10            |            |            |            | $\mu A$ |
| Junction Temperature Range                                                                                     | $T_J$       | - 65 to + 175 |            |            |            | °C      |
| Storage Temperature Range                                                                                      | $T_{STG}$   | - 65 to + 175 |            |            |            | °C      |

## RATING AND CHARACTERISTIC CURVES ( 1SR139-100 ~ 1SR139-600 )

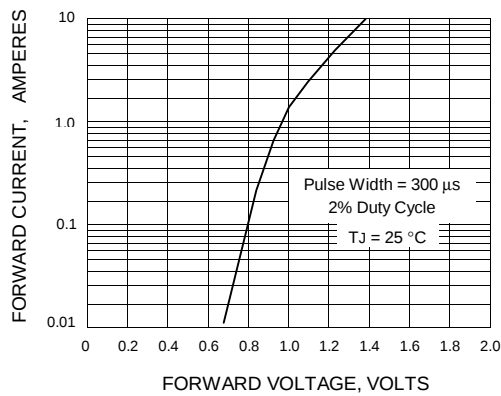
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

