

**Solid State Devices, Inc.**

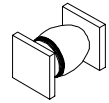
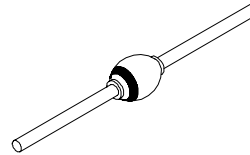
14830 Valley View Blvd \* La Mirada, Ca 90638

Phone: (562) 404-7855 \* Fax: (562) 404-1773

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**DESIGNER'S DATA SHEET****Features:**

- Hyper Fast Recovery: 35 nsec maximum
- PIV to 1200 Volts
- Hermetically Sealed
- Void Free Construction
- For High Efficiency Applications
- Single Chip Construction
- Low Reverse Leakage
- TX, TXV, S Level screening Available

**SDR1AHF & SDR1AHFSMS  
thru  
SDR1NHF & SDR1NHFSMS****1 AMP  
50 - 1200 V  
35 nsec  
Hyper Fast Rectifier****Axial Lead Diode****SMS**

| Maximum Ratings                                                                                          |                              | Symbol                          | Value       | Units              |
|----------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------|-------------|--------------------|
| <b>Peak Repetitive Reverse and DC Blocking Voltage</b>                                                   | <b>SDR1AHF</b>               | $V_{RRM}$<br>$V_{RSM}$<br>$V_R$ | 50          | Volts              |
|                                                                                                          | <b>SDR1BHF</b>               |                                 | 100         |                    |
|                                                                                                          | <b>SDR1DHF</b>               |                                 | 200         |                    |
|                                                                                                          | <b>SDR1GHF</b>               |                                 | 400         |                    |
|                                                                                                          | <b>SDR1JHF</b>               |                                 | 600         |                    |
|                                                                                                          | <b>SDR1KHF</b>               |                                 | 800         |                    |
|                                                                                                          | <b>SDR1MHF</b>               |                                 | 1000        |                    |
|                                                                                                          | <b>SDR1NHF</b>               |                                 | 1200        |                    |
| <b>Average Rectified Forward Current</b><br>(Resistive Load, 60 hz Sine Wave, $T_A = 25^\circ\text{C}$ ) |                              | $I_O$                           | 1.0         | Amps               |
| <b>Peak Surge Current</b><br>(8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$ )                   |                              | $I_{FSM}$                       | 25          | Amps               |
| <b>Operating &amp; Storage Temperature</b>                                                               |                              | $T_{OP}$ & $T_{STG}$            | -65 to +175 | $^\circ\text{C}$   |
| <b>Maximum Thermal Resistance</b>                                                                        | Junction to Leads, $L = 3/8$ | $R_{\theta JE}$                 | 35          | $^\circ\text{C/W}$ |
|                                                                                                          | Junction to Tabs             |                                 | 28          |                    |

**NOTE:** All specifications are subject to change without notification.  
SCD's for these devices should be reviewed by SSDI prior to release.

**DATA SHEET #: RH0119C****DOC**



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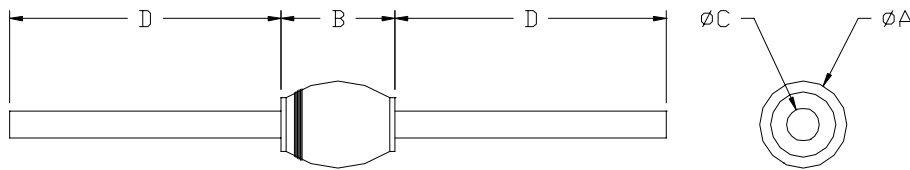
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**SDR1AHF & SDR1AHFSMS  
thru  
SDR1NHF & SDR1NHFSMS**

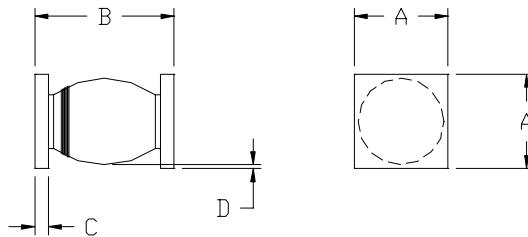
| Electrical Characteristic                                                                              |                                        | Symbol   | Max        | Units    |
|--------------------------------------------------------------------------------------------------------|----------------------------------------|----------|------------|----------|
| <b>Instantaneous Forward Voltage Drop</b><br>( $I_F = 1A_{DC}$ , $T_A = 25^\circ C$ , pulsed)          | SDR1AHF – SDR1JHF<br>SDR1KHF – SDR1NHF | $V_F$    | 3.3<br>3.5 | $V_{DC}$ |
| <b>Instantaneous Forward Voltage Drop</b><br>( $I_F = 1A_{DC}$ , $T_A = -55^\circ C$ , pulsed)         | SDR1AHF – SDR1JHF<br>SDR1KHF – SDR1NHF | $V_F$    | 3.4<br>3.6 | $V_{DC}$ |
| <b>Reverse Leakage Current</b><br>(Rated $V_R$ , $T_A = 25^\circ C$ , pulsed)                          |                                        | $I_R$    | 5          | $\mu A$  |
| <b>Reverse Leakage Current</b><br>(Rated $V_R$ , $T_A = 100^\circ C$ , pulsed)                         |                                        | $I_R$    | 200        | $\mu A$  |
| <b>Reverse Recovery Time</b><br>( $I_F = 500mA$ , $I_R = 1A$ , $I_{RR} = 250Ma$ , $T_A = 25^\circ C$ ) |                                        | $t_{RR}$ | 35         | nsec     |
| <b>Junction Capacitance</b><br>( $V_R = 10V_{DC}$ , $f = 1MHz$ , $T_A = 25^\circ C$ )                  |                                        | $C_J$    | 20         | pF       |

**Case Outline: (Axial)**



| DIM | MIN    | MAX    |
|-----|--------|--------|
| A   | —      | 0.150" |
| B   | —      | 0.190" |
| C   | 0.027" | 0.033" |
| D   | 0.950" | —      |

**Case Outline: (SMS)**



| DIM | MIN    | MAX    |
|-----|--------|--------|
| A   | 0.134" | 0.153" |
| B   | 0.200" | 0.280" |
| C   | 0.022" | 0.028" |
| D   | 0.002" | --     |