



Micro Commercial Components  
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# RL251 THRU RL257

## Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability

## 2.5 Amp Silicon Rectifier 50 to 1000 Volts

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Typical Thermal Resistance ( $R_{\theta JA}$ ) 35°C/W

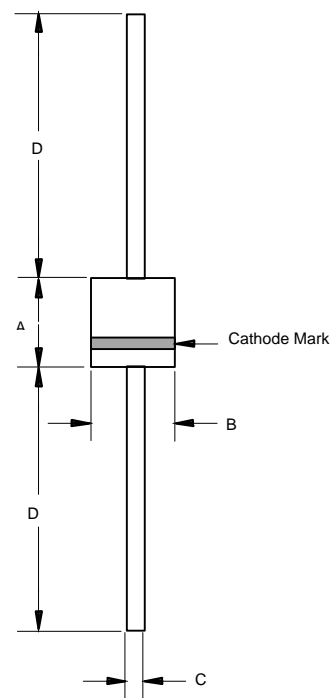
| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| RL251              | ---            | 50V                                    | 35V                 | 50V                         |
| RL252              | ---            | 100V                                   | 70V                 | 100V                        |
| RL253              | ---            | 200V                                   | 140V                | 200V                        |
| RL254              | ---            | 400V                                   | 280V                | 400V                        |
| RL255              | ---            | 600V                                   | 420V                | 600V                        |
| RL256              | ---            | 800V                                   | 560V                | 800V                        |
| RL257              | ---            | 1000V                                  | 700V                | 1000V                       |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |                                       |   |
|---|-------------|---------------------------------------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 2.5 A                                 | $T_A = 75^\circ\text{C}$                              |
| Peak Forward Surge Current                              | $I_{FSM}$   | 150A                                  | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.0V                                  | $I_{FM} = 2.5\text{A};$<br>$T_A = 25^\circ\text{C}$   |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5.0 $\mu\text{A}$<br>50 $\mu\text{A}$ | $T_A = 25^\circ\text{C}$<br>$T_A = 100^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 35pF                                  | Measured at<br>1.0MHz, $V_R=4.0\text{V}$              |

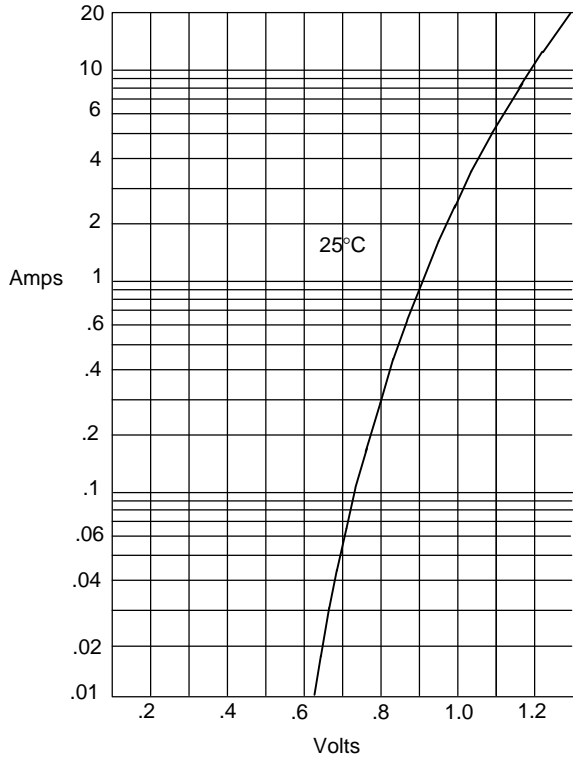
\*Pulse Test: Pulse Width 300 $\mu\text{sec}$ , Duty Cycle 1%

## R-3



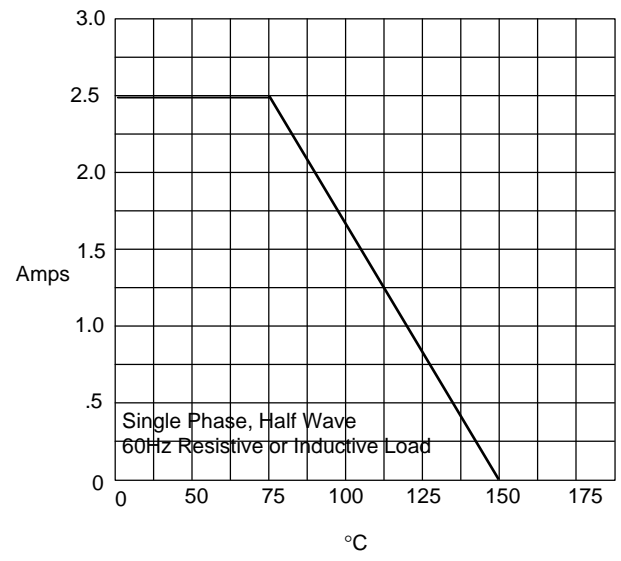
| DIM | DIMENSIONS |      |       |      | NOTE |
|-----|------------|------|-------|------|------|
|     | INCHES     |      | MM    |      |      |
|     | MIN        | MAX  | MIN   | MAX  |      |
| A   | ---        | .160 | ---   | 4.10 |      |
| B   | ---        | .160 | ---   | 4.10 |      |
| C   | .040       | .042 | 1.01  | 1.07 |      |
| D   | 1.000      | ---  | 25.40 | ---  |      |

Figure 1  
Typical Forward Characteristics



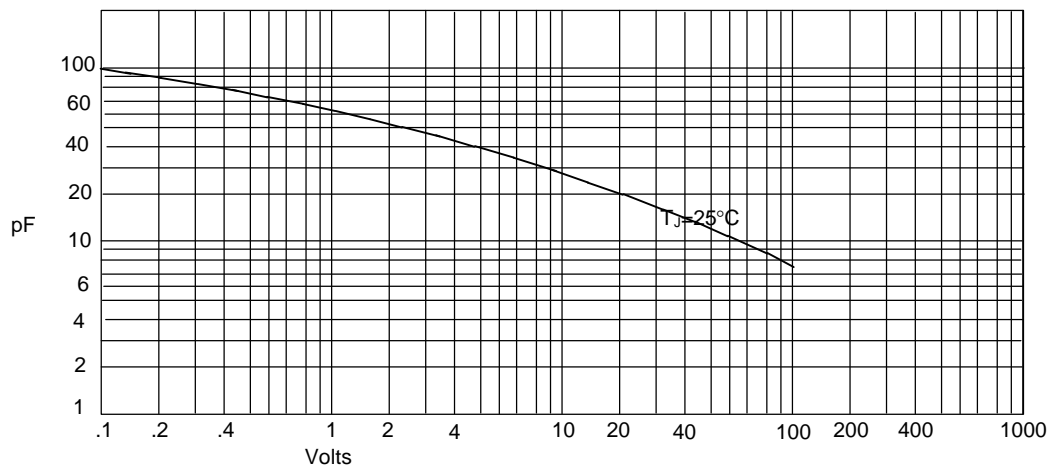
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



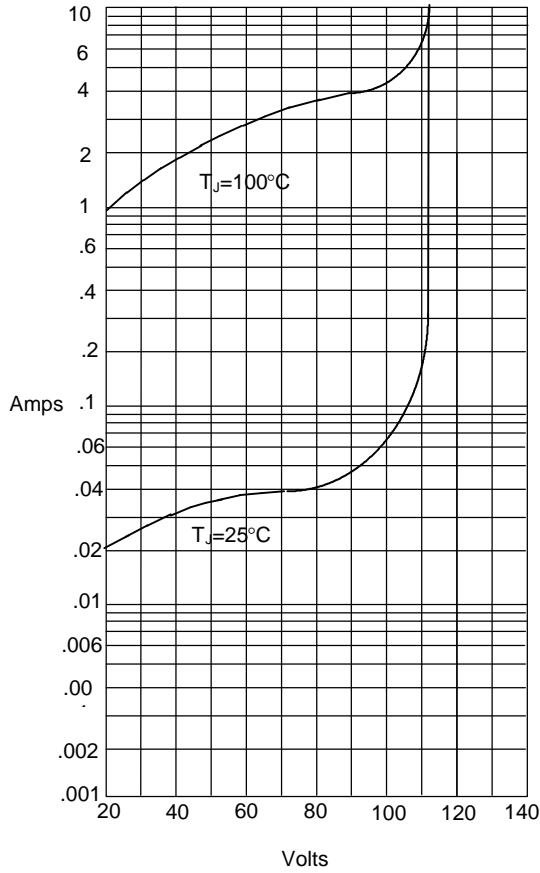
Average Forward Rectified Current - Amperes *versus*  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



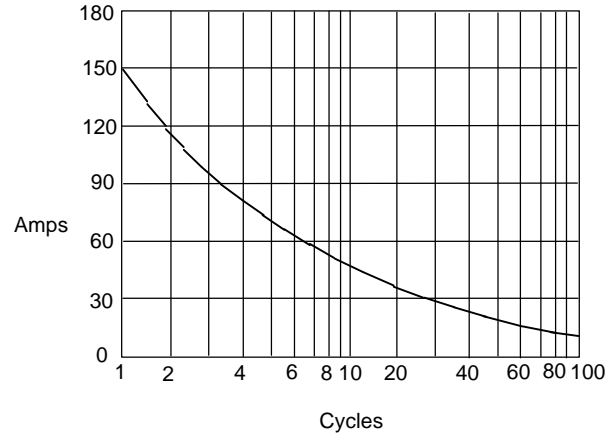
Junction Capacitance - pF *versus*  
Reverse Voltage - Volts

Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Current - Amperes versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles