

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

1N5059 THRU 1N5062

GLASS PASSIVATED RECTIFIER
1.0 AMPS, 200-800 VOLTS

GPR-1A CASE

DESCRIPTION

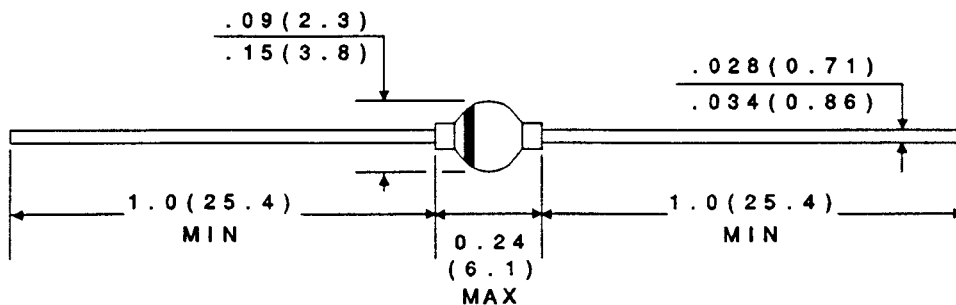
The CENTRAL SEMICONDUCTOR 1N5059 series types are silicon rectifiers manufactured in a hermetically sealed, glass passivated package designed for general purpose applications where high reliability is desired. Higher voltage devices are available in the CPR1-010 series.

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

| | SYMBOL | 1N5059 | 1N5060 | 1N5061 | 1N5062 | UNITS |
|---------------------------------------------------------------------------|----------------|--------|-------------|--------|--------|--------------------|
| Peak Reverse Voltage | V_{RRM} | 200 | 400 | 600 | 800 | V |
| DC Blocking Voltage | V_R | 200 | 400 | 600 | 800 | V |
| RMS Voltage | V_{RMS} | 140 | 280 | 420 | 560 | V |
| Average Forward Current ($T_A = 75^\circ\text{C}$) | I_O | | 1.0 | | | A |
| Peak Forward Surge Current (8.3ms single half sine-wave on rated load) | I_{FSM} | | 50 | | | A |
| Operating and Storage Junction Temperature | T_J, T_{stg} | | -65 to +175 | | | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | | 40 | | | $^\circ\text{C/W}$ |

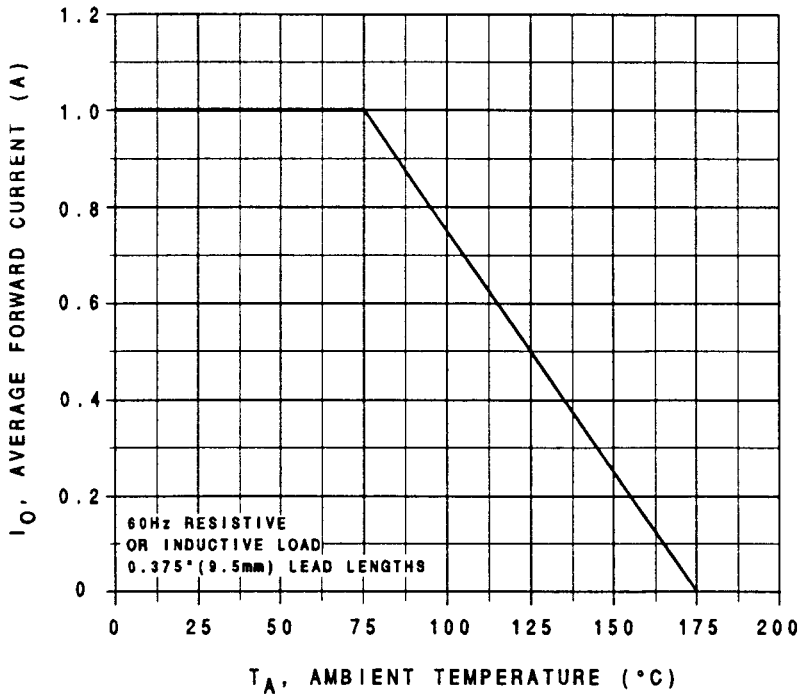
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|----------|---------------------------------------------------------------------------------------|-----|-----|---------------|
| I_R | $V_R = \text{Rated } V_{RRM}$ | | 5.0 | μA |
| I_R | $V_R = \text{Rated } V_{RRM}, T_A = 175^\circ\text{C}$ (1N5059, 1N5060) | | 300 | μA |
| I_R | $V_R = \text{Rated } V_{RRM}, T_A = 175^\circ\text{C}$ (1N5061, 1N5062) | | 200 | μA |
| V_F | $I_F = 1.0\text{A}$ | | 1.2 | V |
| C_J | $V_R = 4.0\text{V}, f = 1\text{ MHz}$ | | 15 | pF |
| t_{rr} | $I_R = 1.0\text{A}, I_F = 0.5\text{A}, R_L = 100\Omega, \text{Rec. to } 0.25\text{A}$ | | 4.0 | ns |

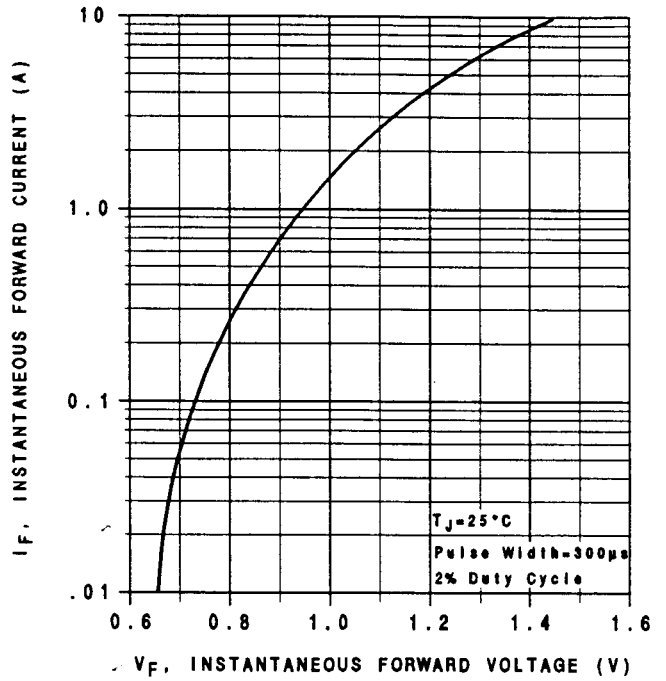


1N5059 THRU 1N5062 RATING AND CHARACTERISTIC CURVES

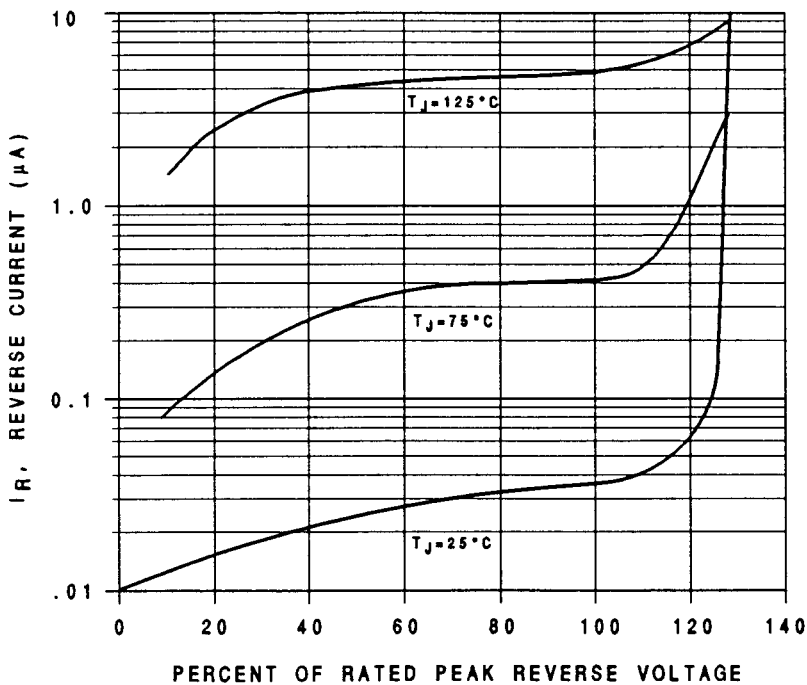
FORWARD CURRENT DERATING CURVE



TYPICAL FORWARD CHARACTERISTICS



TYPICAL REVERSE CHARACTERISTICS



MAXIMUM NON-REPETITIVE REVERSE AVALANCHE POWER DISSIPATION

