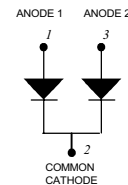
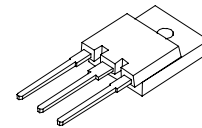
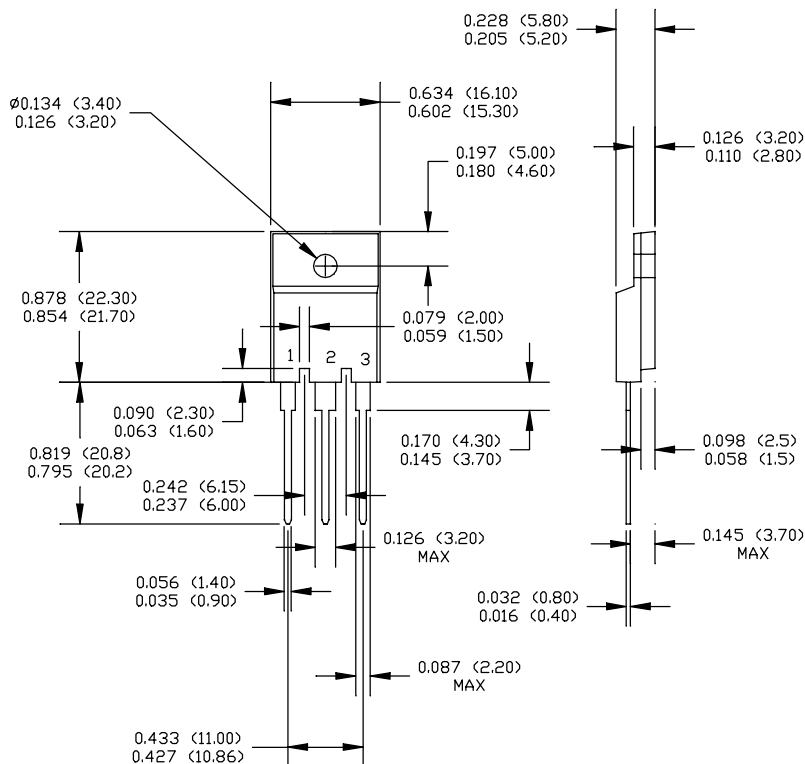


**SENSITRON****SEMICONDUCTOR****40CPQ135****40CPQ150****TECHNICAL DATA  
DATA SHEET****40CPQ135/40CPQ150 SCHOTTKY RECTIFIER****Applications:**

- Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection

**Features:**

- 175°C T<sub>J</sub> operation
- Center tap TO-247 package
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability

**Mechanical Dimensions: In Inches / mm****TO-247**

**SENSITRON****SEMICONDUCTOR****40CPQ135****40CPQ150****Maximum Ratings:**

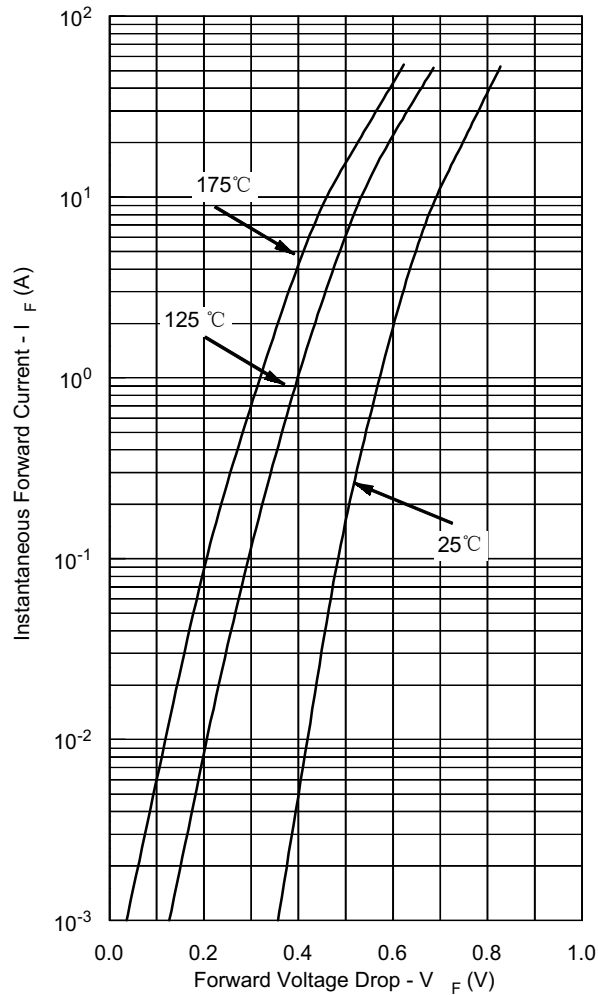
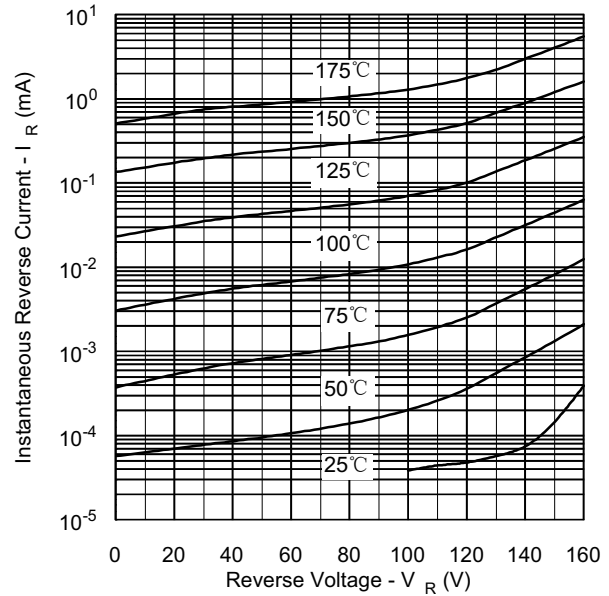
| Characteristics                                            | Symbol      | Condition                                                             | Max.                           | Units |
|------------------------------------------------------------|-------------|-----------------------------------------------------------------------|--------------------------------|-------|
| Peak Inverse Voltage                                       | $V_{RWM}$   | -                                                                     | 135(40CPQ135)<br>150(40CPQ150) | V     |
| Max. Average Forward Current                               | $I_{F(AV)}$ | 50% duty cycle @ $T_C = 145^\circ\text{C}$ ,<br>rectangular wave form | 40                             | A     |
| Max. Peak One Cycle Non-Repetitive Surge Current (per leg) | $I_{FSM}$   | 8.3 ms, half Sine pulse                                               | 432                            | A     |

**Electrical Characteristics:**

| Characteristics                      | Symbol   | Condition                                                                 | Max. | Units |
|--------------------------------------|----------|---------------------------------------------------------------------------|------|-------|
| Max. Forward Voltage Drop (per leg)* | $V_{F1}$ | @ 20 A, Pulse, $T_J = 25^\circ\text{C}$                                   | 0.84 | V     |
|                                      | $V_{F2}$ | @ 20 A, Pulse, $T_J = 125^\circ\text{C}$                                  | 0.68 | V     |
| Max. Reverse Current (per leg)*      | $I_{R1}$ | @ $V_R = \text{rated } V_R$<br>$T_J = 25^\circ\text{C}$                   | 1.5  | mA    |
|                                      | $I_{R2}$ | @ $V_R = \text{rated } V_R$<br>$T_J = 125^\circ\text{C}$                  | 15   | mA    |
| Max. Junction Capacitance (per leg)  | $C_T$    | @ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$<br>$f_{SIG} = 1\text{MHz}$ | 900  | pF    |

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%**Thermal-Mechanical Specifications:**

| Characteristics                               | Symbol          | Condition                            | Specification       | Units              |
|-----------------------------------------------|-----------------|--------------------------------------|---------------------|--------------------|
| Max. Junction Temperature                     | $T_J$           | -                                    | -55 to +175         | $^\circ\text{C}$   |
| Max. Storage Temperature                      | $T_{stg}$       | -                                    | -55 to +175         | $^\circ\text{C}$   |
| Maximum Thermal Resistance Junction to Case   | $R_{\theta JC}$ | DC operation                         | 0.63(per leg)       | $^\circ\text{C/W}$ |
|                                               |                 |                                      | 0.31(per package)   |                    |
| Maximum Thermal Resistance, Case to Heat Sink | $R_{\theta CS}$ | Mounting surface, smooth and greased | 0.24                | $^\circ\text{C/W}$ |
| Approximate Weight                            | wt              | -                                    | 6                   | g                  |
| Mounting Torque                               | $T_M$           | -                                    | 6 (min)<br>12 (max) | Kg-cm              |
| Case Style                                    | TO-247          |                                      |                     |                    |

**SENSITRON****SEMICONDUCTOR****40CPQ135****40CPQ150****Typical Forward Characteristics****Typical Reverse Characteristics****Typical Junction Capacitance**