



SENSITRON

SEMICONDUCTOR

40CPQ135

40CPQ150

**TECHNICAL DATA
DATA SHEET**

40CPQ135/40CPQ150 SCHOTTKY RECTIFIER

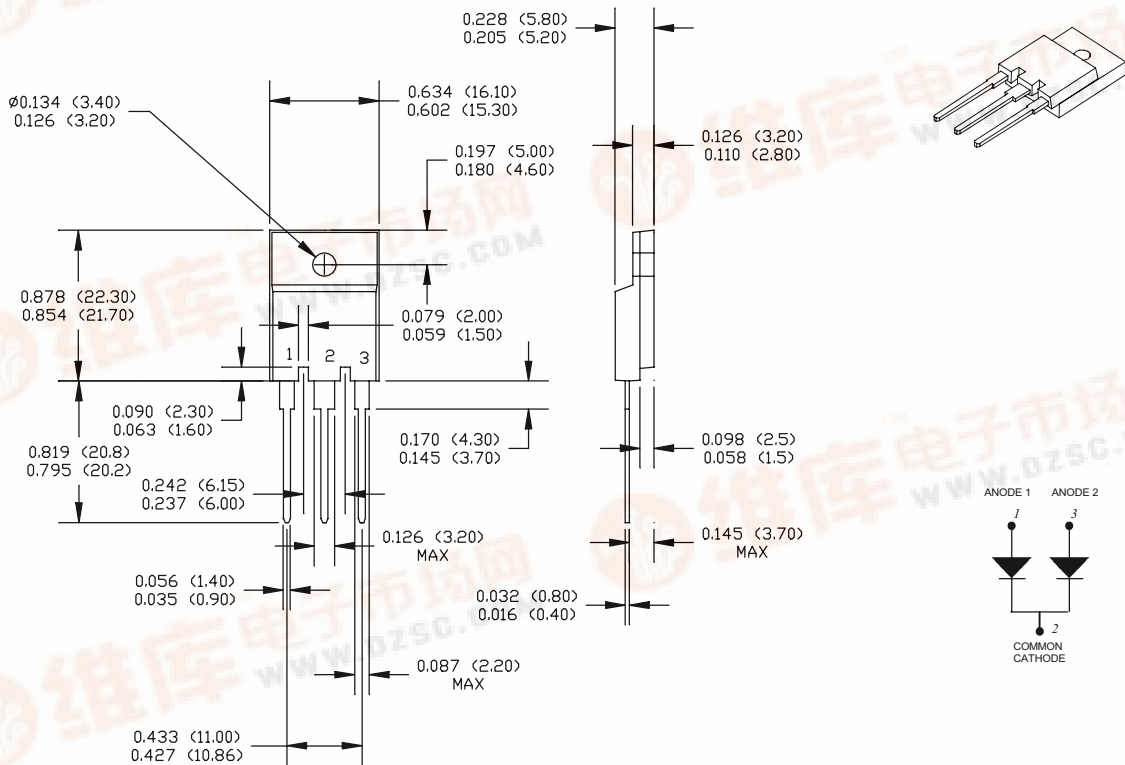
Applications:

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

Features:

- 175°C T_J 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) 150(40CPQ150)	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=145^{\circ}C$, 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, $T_J = 25^{\circ}C$	0.84	V
	V_{F2}	@ 20 A, Pulse, $T_J = 125^{\circ}C$	0.68	V
Max. Reverse Current (per leg)*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^{\circ}C$	1.5	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^{\circ}C$	15	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5V$, $T_C = 25^{\circ}C$ $f_{SIG} = 1MHz$	900	pF

* Pulse Width < 300 μ s, Duty Cycle <2%**Thermal-Mechanical Specifications:**

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



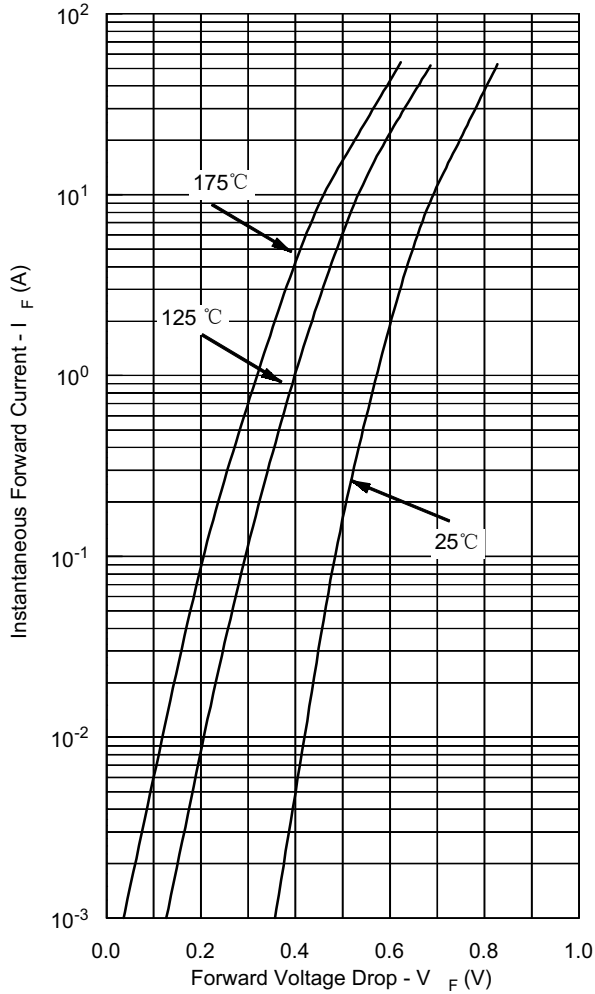
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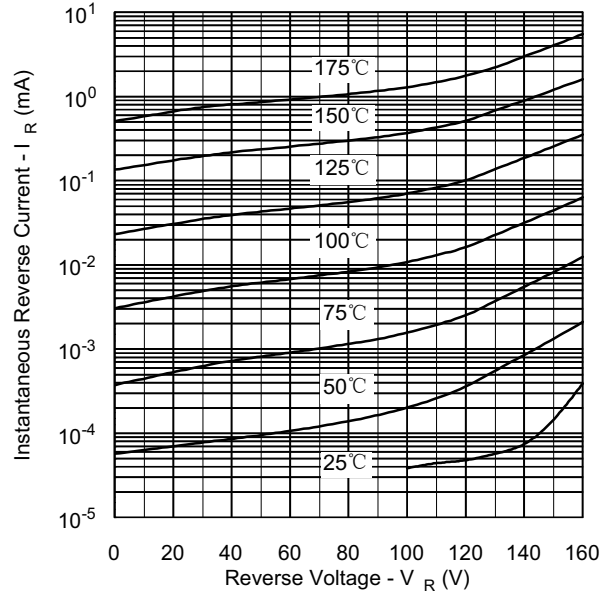
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Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance

