TECHNICAL DATA
DATA SHEET

40CPQ135/40CPQ150 SCHOTTKY RECTIFIER

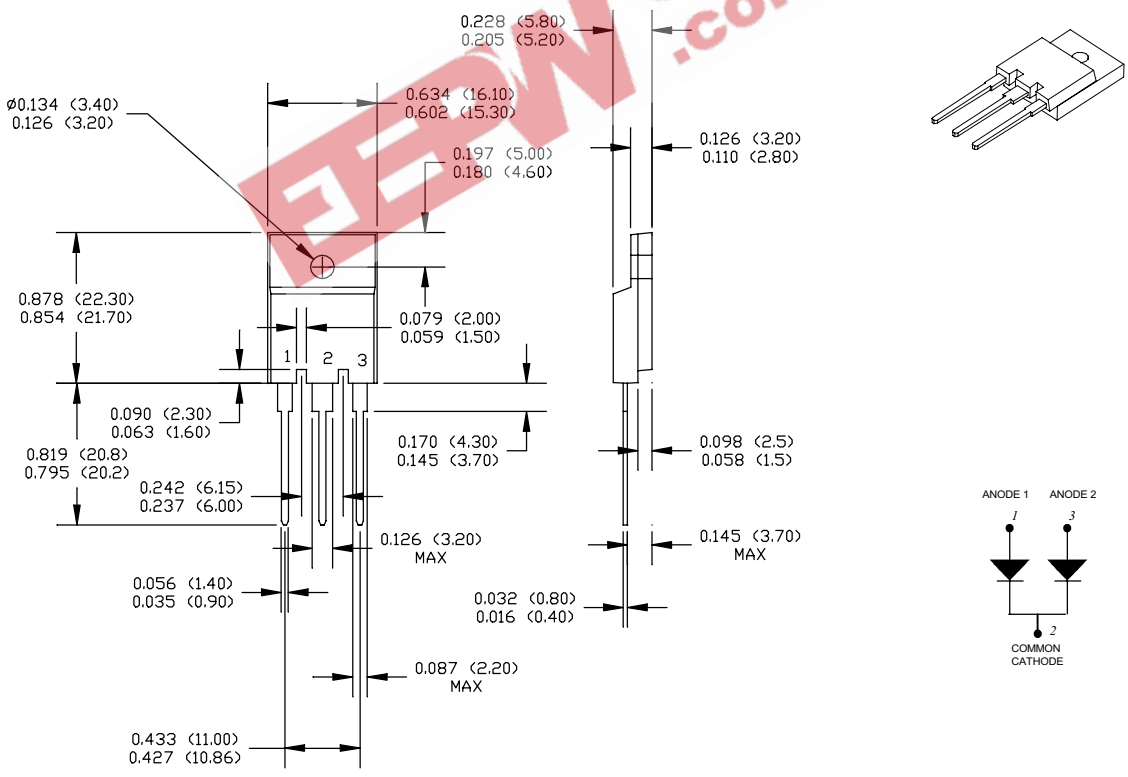
Applications:

- 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

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°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:

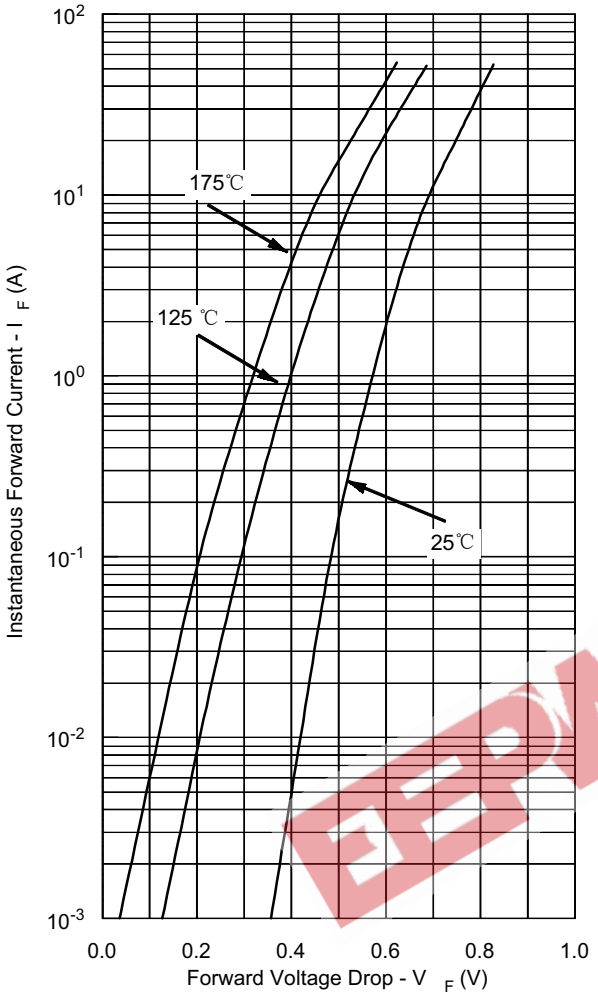
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)*	V_{F1}	@ 20 A, Pulse, T_J = 25 °C	0.84	V
	V_{F2}	@ 20 A, Pulse, T_J = 125 °C	0.68	V
Max. Reverse Current (per leg)*	I_{R1}	@V_R = rated V_R T_J = 25 °C	1.5	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	15	mA
Max. Junction Capacitance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

* Pulse Width < 300µs, Duty Cycle <2%

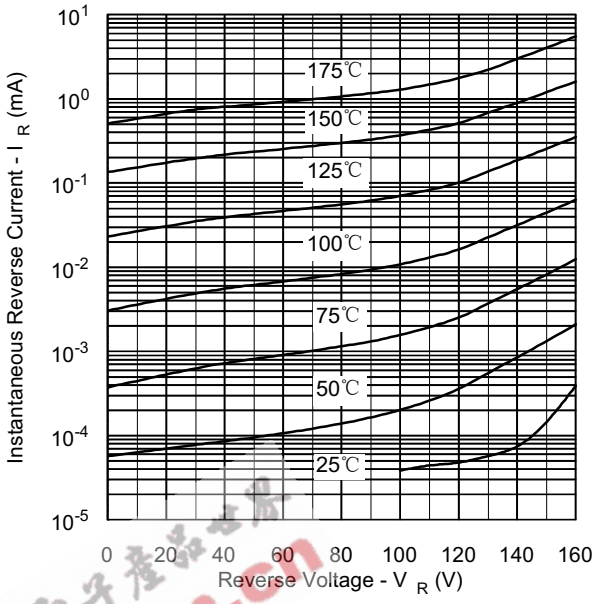
Thermal-Mechanical Specifications:

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

Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance