

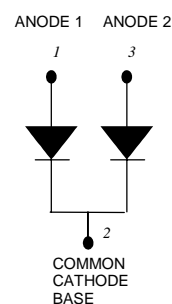
## 40CPQ135/40CPQ150 SCHOTTKY RECTIFIER

### Applications:

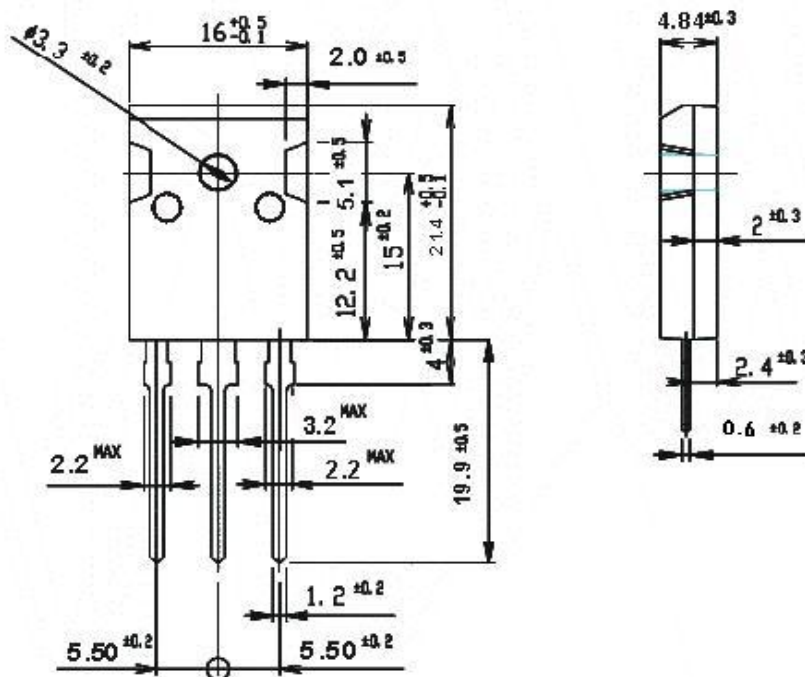
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Features:

- 175 °C T<sub>J</sub> operation
- Center tap TO-247AD 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
- Green Products in Compliance with the RoHS Directive
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

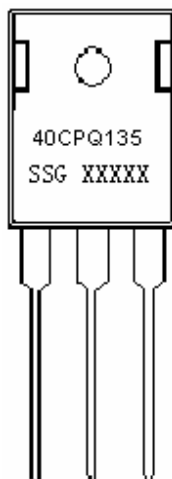


### Mechanical Dimensions: In mm



**TO-247AD**

**Marking Diagram:**



Where XXXXX is YYWWL

40 = Forward Current (40A)  
C = Configuration  
PQ = Device Type  
135 = Reverse Voltage (135V)  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

**Ordering Information:**

Device	Package	Shipping
40CPQ135	TO-247AD (Pb-Free)	30pcs/ tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	135	(40CPQ135)
			150	(40CPQ150)
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @ $T_C = 145^\circ\text{C}$ , 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:**

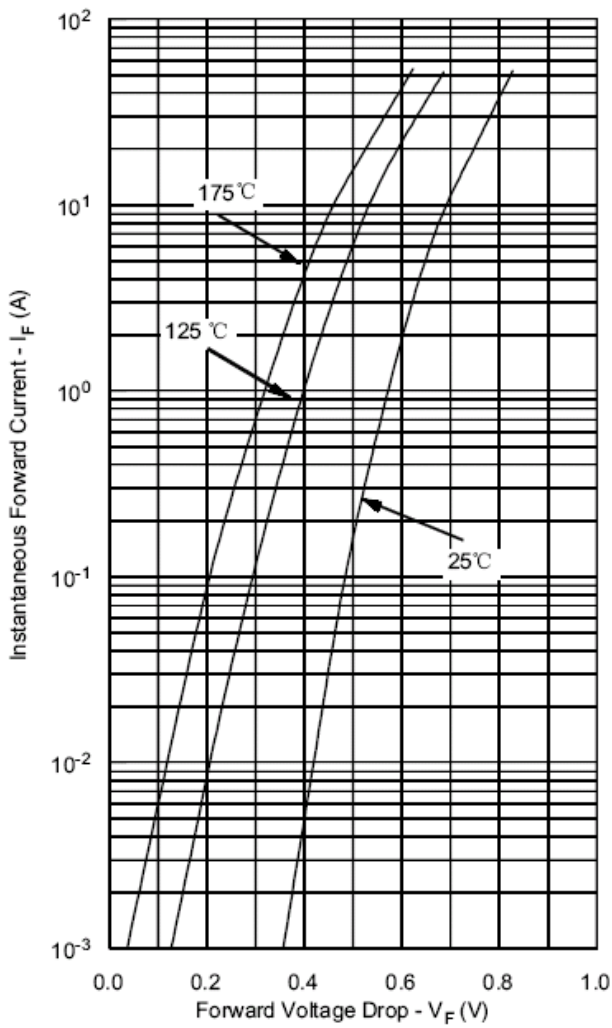
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V <sub>F1</sub>	@ 20A, Pulse, T <sub>J</sub> = 25 °C	0.84	V
	V <sub>F2</sub>	@ 20A, Pulse, T <sub>J</sub> = 125 °C	0.68	V
Max. Reverse Current (per leg) *	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> T <sub>J</sub> = 25 °C	1.5	mA
	I <sub>R2</sub>	@V <sub>R</sub> = rated V <sub>R</sub> T <sub>J</sub> = 125 °C	15.0	mA
Max. Junction Capacitance (per leg)	C <sub>J</sub>	@V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C f <sub>SIG</sub> = 1MHz	900	pF
Max. Voltage Rated of Change	dv/dt	-	10,000	V/μs

\* Pulse Width < 300μs, Duty Cycle <2%

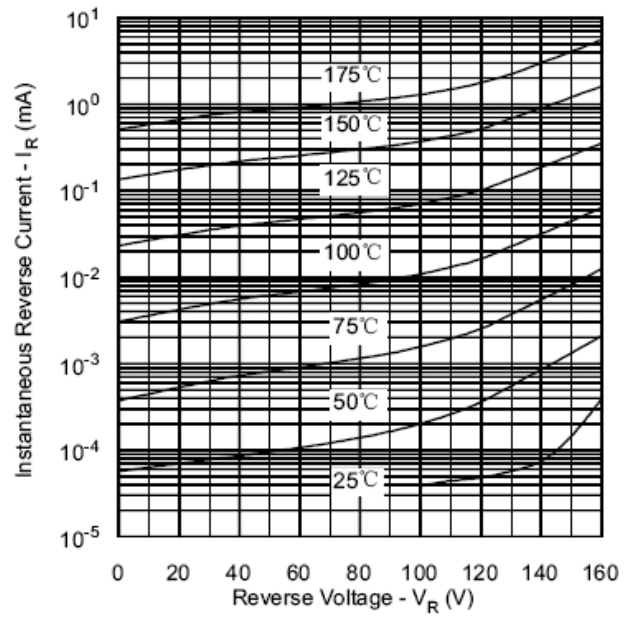
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T <sub>J</sub>	-	-55 to +175	°C
Max. Storage Temperature	T <sub>stg</sub>	-	-55 to +175	°C
Maximum Thermal Resistance Junction to Case	R <sub>θJC</sub>	DC operation	0.63 (per leg)	°C/W
			0.31 (per device)	
Maximum Thermal Resistance, Case to Heat Sink	R <sub>θCS</sub>	Mounting surface, smooth and greased	0.24	°C/W
Approximate Weight	wt	-	6.7	g
Case Style	TO-247AD			

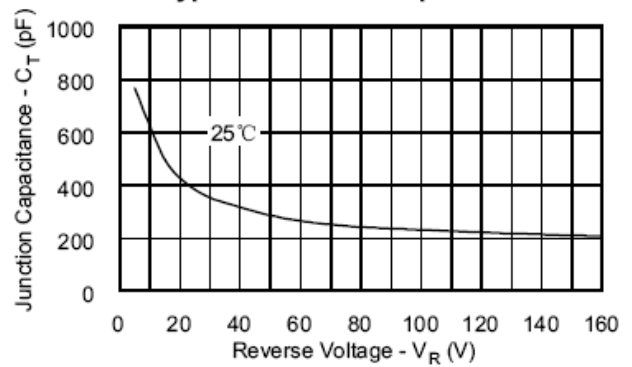
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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