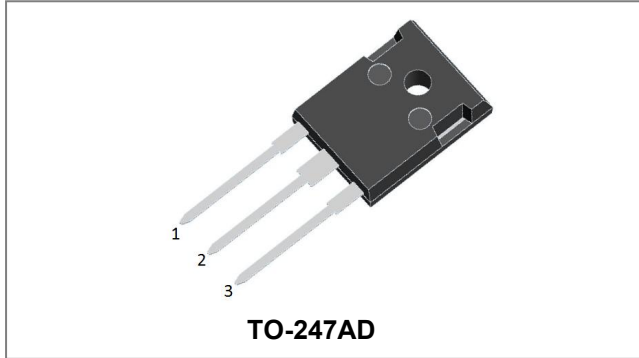


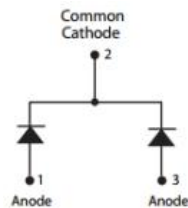
30CPQ135 SCHOTTKY RECTIFIER



Features

- 175 °C T_J operation
- 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
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|--|--|---|-------------------------------|-------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | - | 135 | V |
| Average Rectified Forward Current | I _{F(AV)} | 50% duty cycle @T _c =140°C, rectangular wave form | 15(Per Leg) 30(Per Device) | A |
| Peak One Cycle Non-Repetitive Surge Current(Per Leg) | I _{FSM} | 8.3ms, Half Sine pulse, T _c = 25 °C | 336 | A |

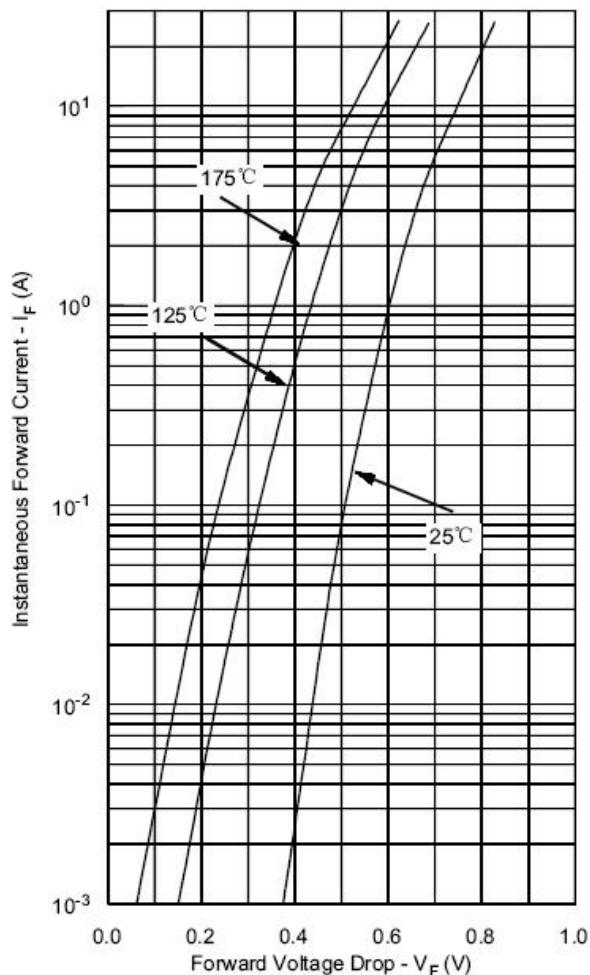
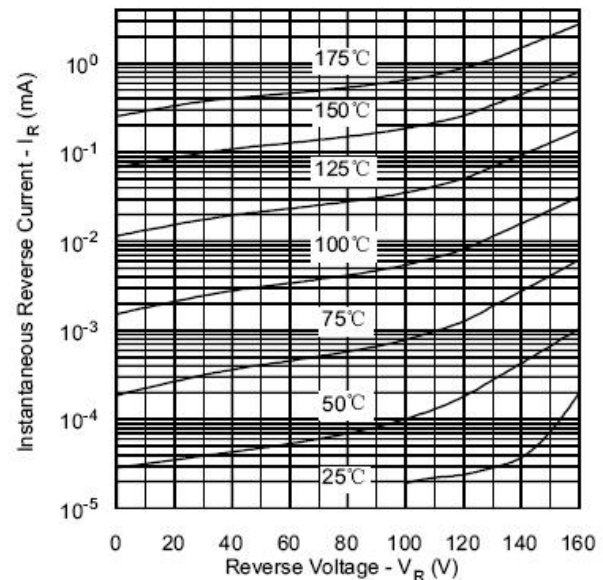
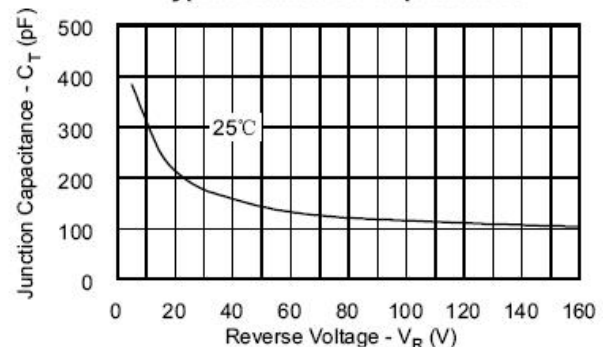
Electrical Characteristics:

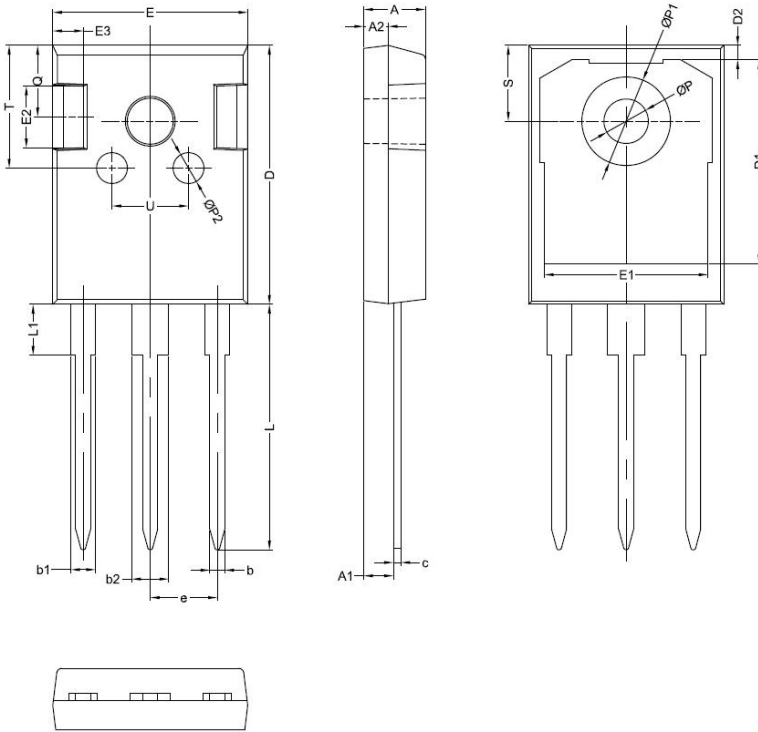
| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|------------------------------------|-----------------|---|--------|--------|-------|
| Forward Voltage Drop (Per Leg)* | V _{F1} | @ 15A, Pulse, T _J = 25 °C | 0.78 | 0.86 | V |
| | V _{F2} | @ 15A, Pulse, T _J = 125 °C | 0.62 | 0.75 | V |
| Reverse Current (Per Leg)* | I _{R1} | @V _R = rated V _R T _J = 25 °C | 0.0002 | 0.5 | mA |
| | I _{R2} | @V _R = rated V _R T _J = 125 °C | 0.2 | 15 | mA |
| Junction Capacitance(Per Leg) | C _T | @V _R = 5V, T _c = 25 °C f _{SIG} = 1MHz | 390 | 500 | pF |
| Voltage Rate of Change | dv/dt | - | - | 10,000 | V/μs |

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|--|-----------------------|--------------------------------------|---------------|----------------------|
| Junction Temperature | T_J | - | -55 to +175 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{stg} | - | -55 to +175 | $^{\circ}\text{C}$ |
| Typical Thermal Resistance Junction to Case(per leg) | $R_{\theta\text{JC}}$ | DC operation | 1.1 | $^{\circ}\text{C/W}$ |
| Typical Thermal Resistance, case to Heat Sink | $R_{\theta\text{cs}}$ | Mounting surface, smooth and greased | 0.24 | $^{\circ}\text{C/W}$ |
| Approximate Weight | wt | - | 6.28 | g |
| Case Style | TO-247AD | | | |

Ratings and Characteristics Curves
Typical Forward Characteristics

Typical Reverse Characteristics

Typical Junction Capacitance


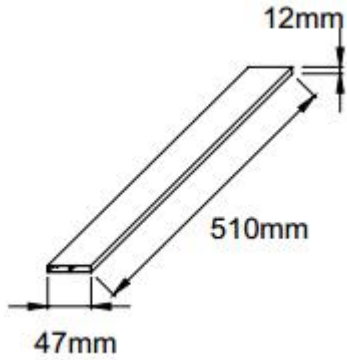
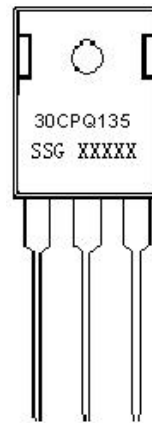
Mechanical Dimensions TO-247AD


| SYMBOL | Millimeters | | |
|--------|-------------|-------|-------|
| | MIN. | TYP. | MAX. |
| A | 4.80 | 5.00 | 5.20 |
| A1 | 2.20 | 2.41 | 2.61 |
| A2 | 1.90 | 2.00 | 2.10 |
| b | 1.10 | 1.20 | 1.40 |
| b1 | 1.80 | 2.00 | 2.20 |
| b2 | 2.80 | 3.00 | 3.20 |
| c | 0.50 | 0.60 | 0.75 |
| D | 20.30 | 21.00 | 21.20 |
| D1 | | 16.55 | |
| D2 | | 1.20 | |
| E | 15.45 | 15.80 | 16.00 |
| E1 | | 13.30 | |
| E2 | | 5.00 | |
| E3 | | 2.50 | |
| e | | 5.44 | |
| L | 19.42 | 19.92 | 20.70 |
| L1 | | 4.13 | |
| P | 3.50 | 3.60 | 3.70 |
| P1 | 7.1 | | 7.40 |
| P2 | | 2.50 | |
| Q | | 5.80 | |
| S | 6.05 | 6.15 | 6.25 |
| T | | 10.00 | |
| U | | 6.20 | |

Ordering Information:

| Device | Package | Shipping |
|----------|-------------------|--------------|
| 30CPQ135 | TO-247AD(Pb-Free) | 25pcs / tube |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Tube Specification

Marking Diagram


Where XXXXX is YYWWL

- 30 = Forward Current (30A)
- 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

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