

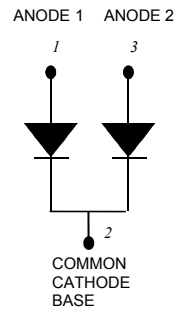
40CPQ015 SCHOTTKY RECTIFIER

Applications:

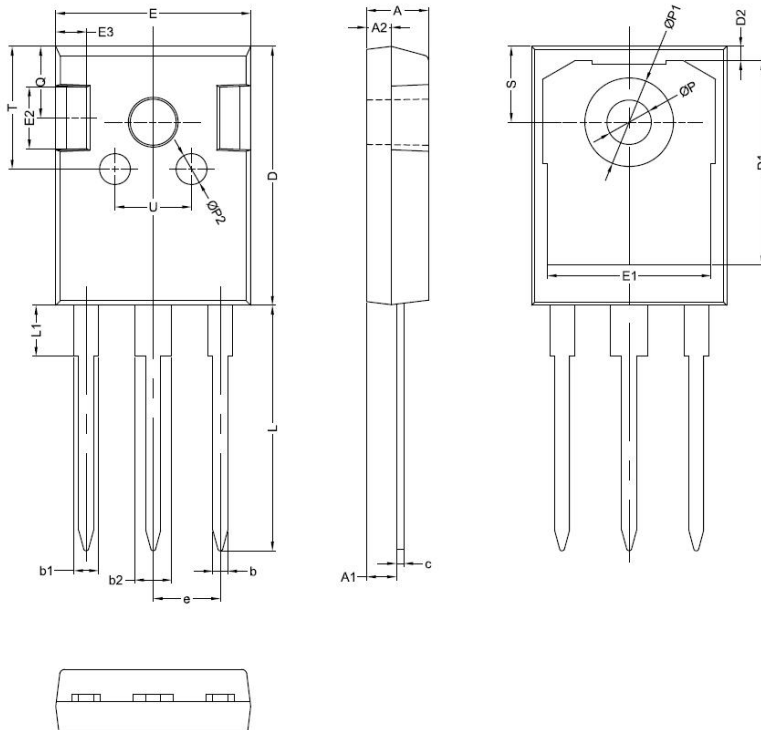
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

- 100°C T_J operation
- Center tap configuration
- 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

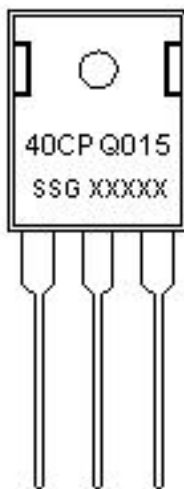


Mechanical Dimensions: In mm



| SYMBOL | MIN. | TYP. | MAX. |
|--------|-------|-------|-------|
| A | 4.80 | 5.00 | 5.20 |
| A1 | 2.21 | 2.41 | 2.61 |
| A2 | 1.90 | 2.00 | 2.10 |
| b | 1.10 | 1.20 | 1.35 |
| b1 | | 2.00 | |
| b2 | | 3.00 | |
| c | 0.55 | 0.60 | 0.75 |
| D | 20.80 | 21.00 | 21.20 |
| D1 | | 16.55 | |
| D2 | | 1.20 | |
| E | 15.60 | 15.80 | 16.00 |
| E1 | | 13.30 | |
| E2 | | 5.00 | |
| E3 | | 2.50 | |
| e | | 5.44 | |
| L | 19.42 | 19.92 | 20.42 |
| L1 | | 4.13 | |
| P | 3.50 | 3.60 | 3.70 |
| P1 | | | 7.40 |
| P2 | | 2.50 | |
| Q | | 5.80 | |
| S | 6.05 | 6.15 | 6.25 |
| T | | 10.00 | |
| U | | 6.20 | |

TO-247AD (HD)

Marking Diagram:


Where XXXXX is YYWWL

| | |
|----------|--------------|
| 40CPQ015 | = Part Name |
| SSG | = SSG |
| YY | = Year |
| WW | = Week |
| L | = Lot Number |

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

Ordering Information:

| Device | Package | Shipping |
|----------|-----------------------|--------------|
| 40CPQ015 | 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.

Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|--|---------------------------------|--|------|-------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | - | 15 | V |
| Average Rectified Forward Current (per device) | $I_{F(AV)}$ | 50% duty cycle @ $T_C = 75^\circ\text{C}$, rectangular wave form | 40 | A |
| Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 120 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|-------------------------------------|-----------------|---|--------------|-------|
| Forward Voltage Drop (per leg) * | V _{F1} | @ 20A, Pulse, T _J = 25 °C @ 40A, Pulse, T _J = 25 °C | 0.42 0.50 | V |
| | V _{F2} | @ 20A, Pulse, T _J = 125 °C @ 40A, Pulse, T _J = 125 °C | 0.33 0.42 | V |
| Reverse Current (per leg) * | I _{R1} | @V _R = rated V _R T _J = 25 °C | 10.5 | mA |
| Junction Capacitance (per leg) | C _T | @V _R = 5V, T _C = 25 °C f _{SIG} = 100KHz -1MHz | 2500 | pF |
| Voltage Rate of Change | dv/dt | - | 10,000 | V/μs |

* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|---|------------------|--------------|---------------|-------|
| Junction Temperature | T _J | - | -55 to +100 | °C |
| Storage Temperature | T _{stg} | - | -55 to +150 | °C |
| Maximum Thermal Resistance Junction to Case (per leg) | R _{θJC} | DC operation | 1.4 | °C/W |
| Approximate Weight | wt | - | 2 | g |
| Case Style | TO-247AD | | | |

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