Technical Data
Data Sheet N0611, Rev. -

*Green Products*

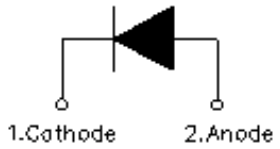
# 19TQ015CJ SCHOTTKY RECTIFIER

## Applications:

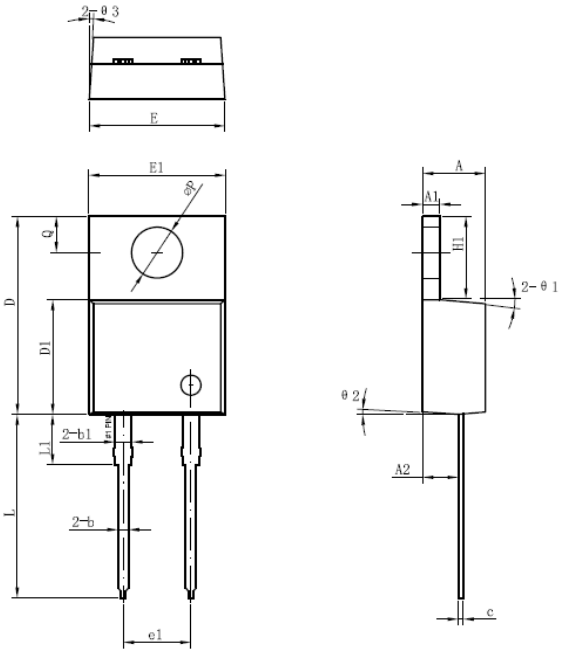
- Switching power supply
- Redundant power subsystems
- Converters
- Free-Wheeling diodes
- Reverse battery protection

## Features:

- 100 ℃ $T_J$ operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Low forward voltage drop
- 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

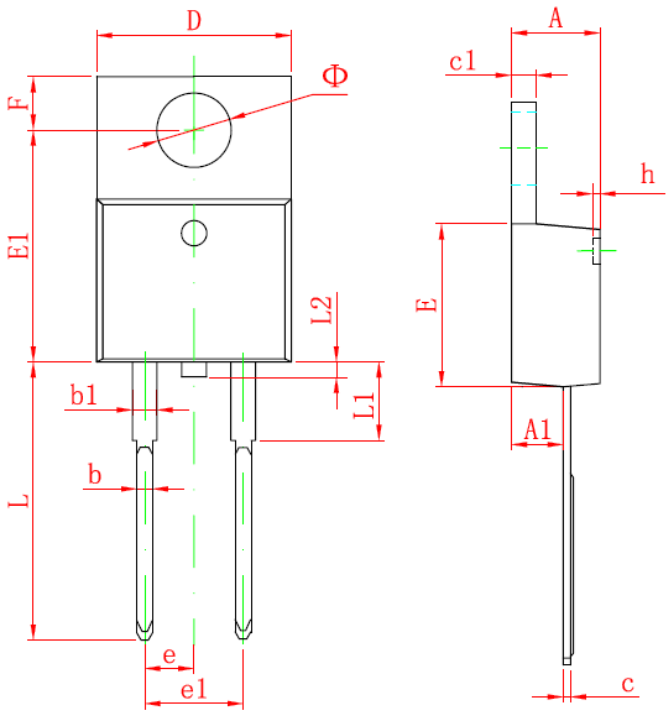



## Mechanical Dimensions: In mm / Inches




| Symbol | Dimensions in millimeters | | |
|---|---|---|---|
| | Min. | Typical | Max. |
| A | 4.55 | 4.70 | 4.85 |
| A1 | 1.17 | 1.27 | 1.37 |
| A2 | 2.59 | 2.69 | 2.89 |
| b | 0.71 | 0.81 | 0.96 |
| b1 | | 1.27 | |
| c | 0.36 | 0.38 | 0.61 |
| D | 14.64 | 14.94 | 15.24 |
| D1 | 8.55 | 8.07 | 8.85 |
| E | 10.01 | 10.16 | 10.31 |
| E1 | 9.98 | 10.18 | 10.38 |
| e1 | | 5.08 | |
| H1 | 6.04 | 6.24 | 6.44 |
| L | 13.00 | 13.86 | 14.08 |
| L1 | | 3.80 | |
| ΦP | 3.74 | 3.84 | 4.04 |
| Q | 2.54 | 2.74 | 2.94 |
| Θ1 | | 5° | |
| Θ2 | | 4° | |
| Θ3 | | 4° | |

**OPTION 1(HD)**




| Symbol | Dimensions In Millimeters | |
|---|---|---|
| | Min | Max |
| A | 4.470 | 4.670 |
| A1 | 2.520 | 2.820 |
| b | 0.710 | 0.910 |
| b1 | 1.170 | 1.370 |
| c | 0.310 | 0.530 |
| c1 | 1.170 | 1.370 |
| D | 10.010 | 10.310 |
| E | 8.500 | 8.900 |
| E1 | 12.060 | 12.460 |
| e | 2.540 TYP | |
| e1 | 4.980 | 5.180 |
| F | 2.590 | 2.890 |
| h | 0.000 | 0.300 |
| L | 13.400 | 13.800 |
| L1 | 3.560 | 3.960 |
| L2 | | 1.000 |
| Φ | 3.735 | 3.935 |

**OPTION 2(CJ)**

**TO-220AC**

**Technical Data**
**Data Sheet N0611, Rev. -**

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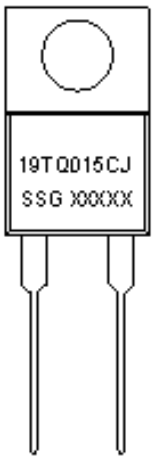
## Marking Diagram:




Where XXXXX is YYWWL

| | |
|---|---|
| 19TQ015CJ | =Part Name |
| SSG | = SSG |
| YY | = Year |
| WW | = Week |
| L | = Lot Number |

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

## Ordering Information:

| Device | Package | Shipping |
|---|---|---|
| 19TQ015CJ | TO-220AC (Pb-Free) | 50pcs / 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 | $V_{RWM}$ | - | 15 | V |
| Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @$T_C$ = 75°C, rectangular wave form | 19 | A |
| Peak One Cycle Non-Repetitive Surge Current (per leg) | $I_{FSM}$ | 8.3 ms, half Sine pulse | 120 | A |

## Electrical Characteristics:

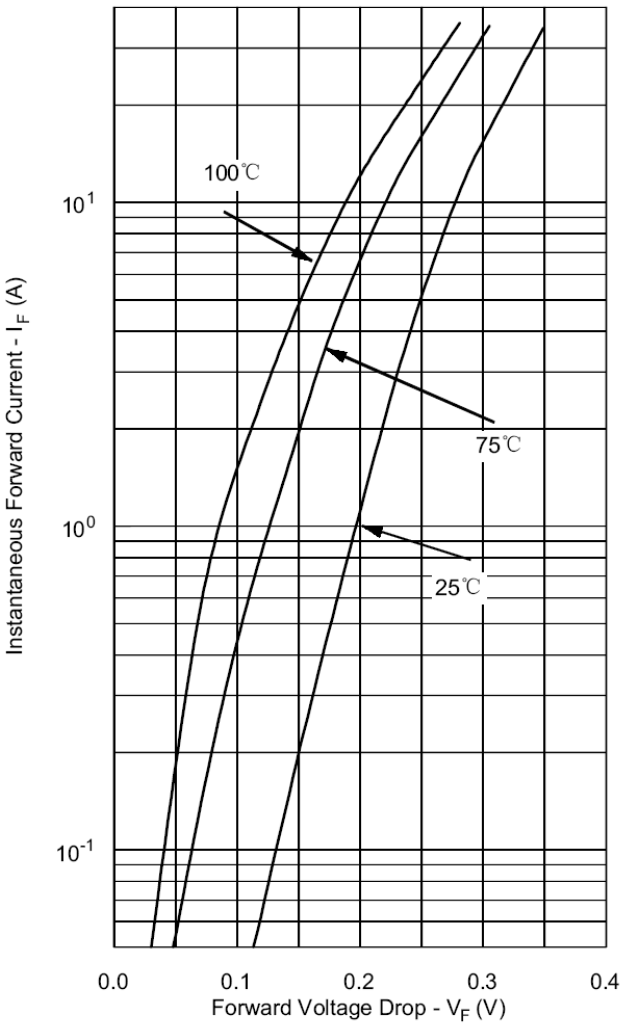
| Characteristics | Symbol | Condition | Max. | Units |
|---|---|---|---|---|
| Forward Voltage Drop | $V_{F1}$ | @ 19A, Pulse, $T_A$ = 25 °C<br>@ 38A, Pulse, $T_A$ = 25 °C | 0.36<br>0.46 | V |
| Reverse Current (per leg) * | $I_{R1}$ | @$V_R$ = rated $V_R$<br>$T_J$ = 25 °C | 10.5 | mA |
| Junction Capacitance (per leg) | $C_T$ | @$V_R$ = 5V, $T_C$ = 25 °C<br>$f_{SIG}$ = 100KHz -1MHz | 2500 | pF |
| Voltage Rate of Change | dv/dt | - | 10,000 | V/μs |

* Pulse Width < 300μs, Duty Cycle <2%

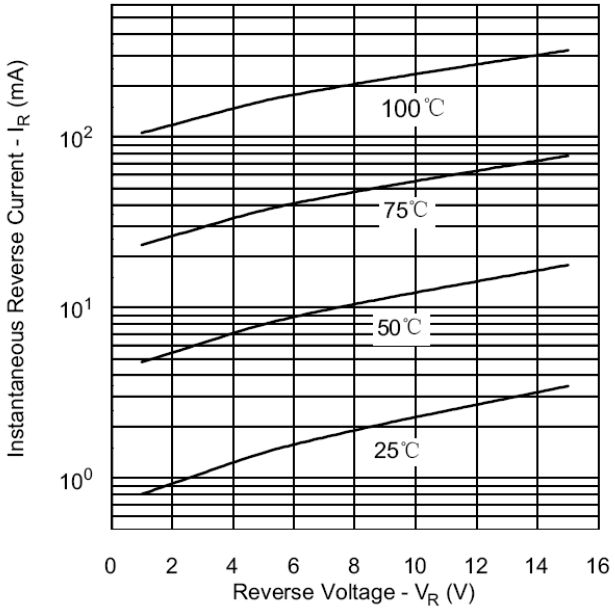
## Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|---|---|---|---|---|
| Junction Temperature | $T_J$ | - | -55 to +100 | °C |
| Storage Temperature | $T_{stg}$ | - | -55 to +100 | °C |
| Maximum Thermal Resistance Junction to Case (per package) | $R_{\theta JC}$ | DC operation | 0.8 | °C/W |
| Approximate Weight | wt | - | 1.91 | g |
| Case Style | TO-220AC | | | |

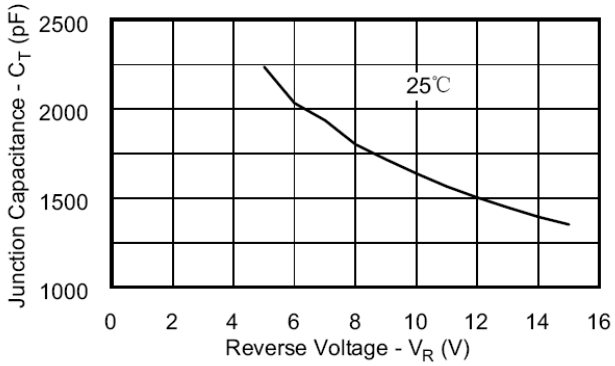
## Typical Forward Characteristics




## Typical Reverse Characteristics




## Typical Junction Capacitance



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