



**THE DATASHEET OF
20CJQ100TR**



20CJQ100 SCHOTTKY RECTIFIER

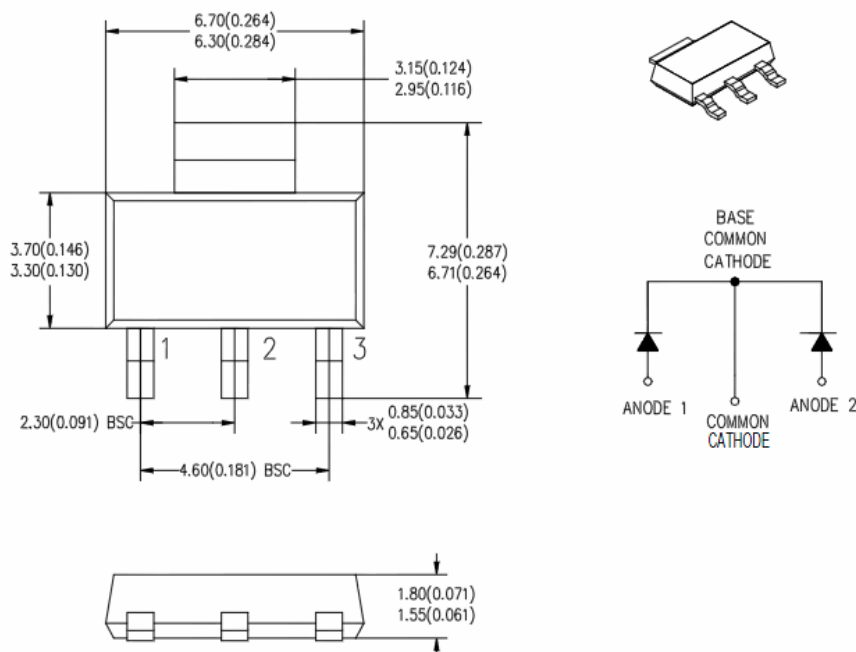
Applications:

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

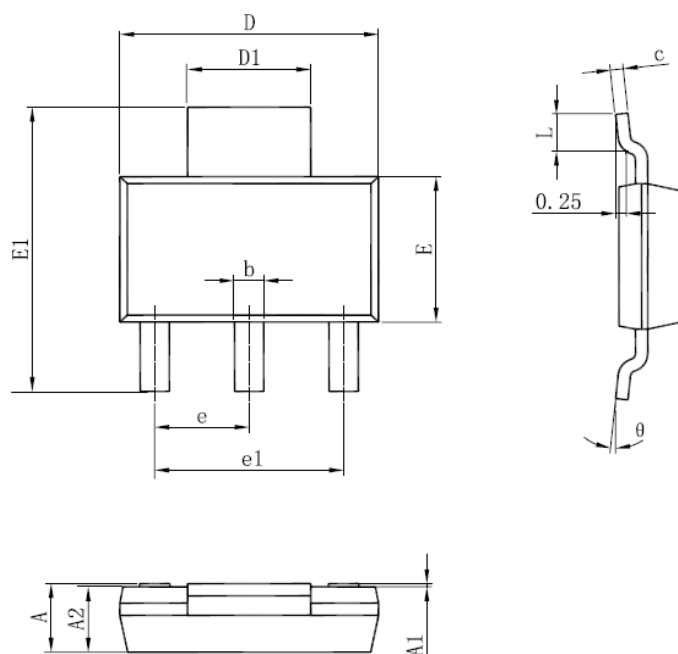
Features:

- 150°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 / Inches



OPTION 1



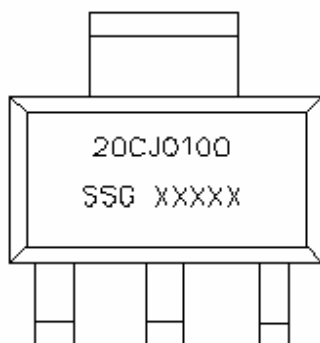
| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 1.520 | 1.800 | 0.060 | 0.071 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.500 | 1.700 | 0.059 | 0.067 |
| b | 0.660 | 0.820 | 0.026 | 0.032 |
| c | 0.250 | 0.350 | 0.010 | 0.014 |
| D | 6.200 | 6.400 | 0.244 | 0.252 |
| D1 | 2.900 | 3.100 | 0.114 | 0.122 |
| E | 3.300 | 3.700 | 0.130 | 0.146 |
| E1 | 6.830 | 7.070 | 0.269 | 0.278 |
| e | 2.300(BSC) | | 0.091(BSC) | |
| e1 | 4.500 | 4.700 | 0.177 | 0.185 |
| L | 0.900 | 1.150 | 0.035 | 0.045 |
| θ | 0° | 10° | 0° | 10° |

OPTION 2(CJ)

SOT-223

Marking Diagram:

Where XXXXX is YYWWL



20CJQ100 = Part Name
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

| Device | Package | Shipping |
|----------|----------------------|----------------|
| 20CJQ100 | SOT-223 (Pb-Free) | 3000pcs / reel |

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} | - | 100 | V |
| Max. Average Forward *(per device) | I _{F(AV)} | 50% duty cycle @T _C = 126°C, rectangular wave form | 2 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current | I _{FSM} | 8.3 ms, half Sine pulse | 26 | A |



Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------------------|----------|---|--------|------------------|
| Max. Forward Voltage Drop (per leg) * | V_{F1} | @ 1A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.85 | V |
| | V_{F2} | @ 1A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.75 | V |
| Max. Reverse Current (per leg) * | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$ | 0.5 | mA |
| | I_{R2} | @ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$ | 1.0 | mA |
| Max. Junction Capacitance (per leg) | C_T | @ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ | 45 | pF |
| Max. 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 |
|---|-----------------|--------------|---------------|--------------------|
| Max. Junction Temperature | T_J | - | -55 to +150 | $^\circ\text{C}$ |
| Max. Storage Temperature | T_{stg} | - | -55 to +150 | $^\circ\text{C}$ |
| Maximum Thermal Resistance Junction to Case | $R_{\theta JC}$ | DC operation | 15 | $^\circ\text{C/W}$ |
| Maximum Thermal Resistance, Case to Heat Sink | $R_{\theta JA}$ | DC operation | 65 | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 0.13 | g |
| Case Style | SOT-223 | | | |

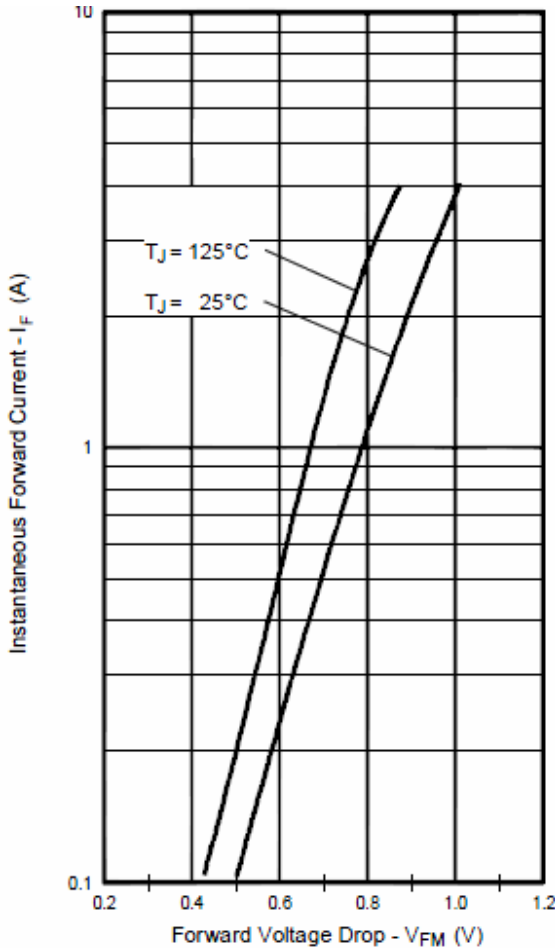


Fig. 1 Max. Forward Voltage Drop Characteristics (Per Leg)

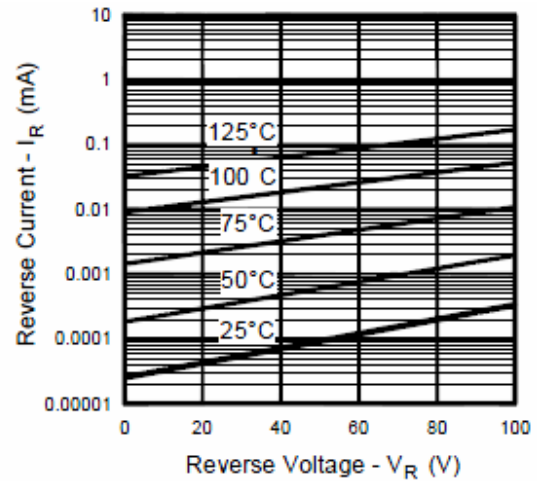


Fig. 2 Typical Values of Reverse Current Vs. Reverse Voltage (Per Leg)

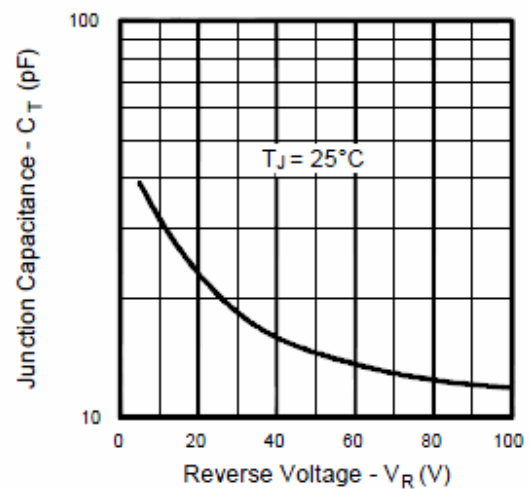


Fig. 3 Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)





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