

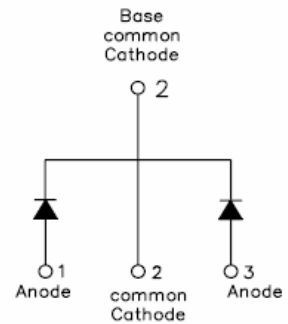
SBR60100CT SCHOTTKY RECTIFIER

Applications:

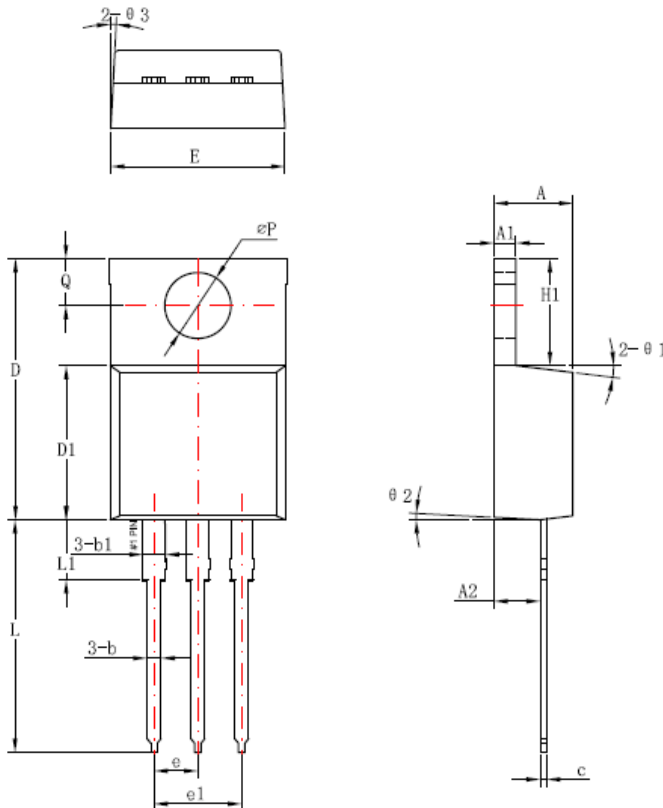
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

- 200°C TJ 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

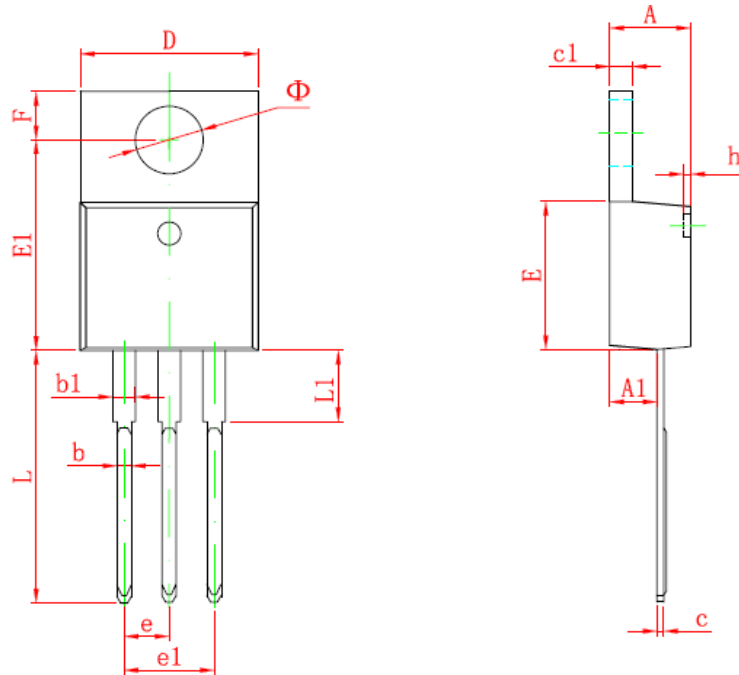


Mechanical Dimensions (In mm / Inches) and Marking:

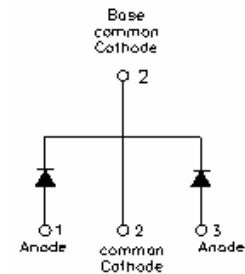


| Symbol | Dimensions in millimeters | | |
|--------|---------------------------|---------|-------|
| | Min | Typical | Max |
| A | 4.42 | 4.57 | 4.72 |
| A1 | 1.17 | 1.27 | 1.37 |
| A2 | 2.59 | 2.69 | 2.89 |
| b | 0.71 | 0.81 | 0.96 |
| b1 | | 1.27 | |
| c | 0.36 | 0.38 | 0.61 |
| D | 14.94 | 15.24 | 15.54 |
| D1 | 8.85 | 9.00 | 9.15 |
| E | 10.01 | 10.16 | 10.31 |
| e | | 2.54 | |
| e1 | | 5.06 | |
| H1 | 6.04 | 6.24 | 6.44 |
| L | 12.7 | 13.56 | 13.78 |
| L1 | | 3.5 | |
| ΦP | 3.74 | 3.84 | 4.04 |
| Q | 2.54 | 2.74 | 2.94 |
| Θ1 | | 7° | |
| Θ2 | | 3° | |
| Θ3 | | 4° | |

OPTION1 (HD)



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 4.470 | 4.670 | 0.176 | 0.184 |
| A1 | 2.520 | 2.820 | 0.099 | 0.111 |
| b | 0.710 | 0.910 | 0.028 | 0.036 |
| b1 | 1.170 | 1.370 | 0.046 | 0.054 |
| c | 0.310 | 0.530 | 0.012 | 0.021 |
| c1 | 1.170 | 1.370 | 0.046 | 0.054 |
| D | 10.010 | 10.310 | 0.394 | 0.406 |
| E | 8.500 | 8.900 | 0.335 | 0.350 |
| E1 | 12.060 | 12.460 | 0.475 | 0.491 |
| e | 2.540 TYP | | 0.100 TYP | |
| e1 | 4.980 | 5.180 | 0.196 | 0.204 |
| F | 2.590 | 2.890 | 0.102 | 0.114 |
| h | 0.000 | 0.300 | 0.000 | 0.012 |
| L | 13.400 | 13.800 | 0.528 | 0.543 |
| L1 | 3.560 | 3.960 | 0.140 | 0.156 |
| Φ | 3.735 | 3.935 | 0.147 | 0.155 |

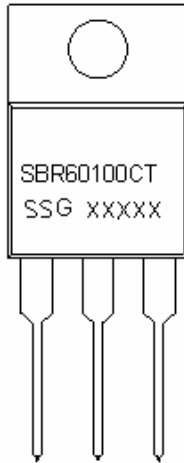


OPTION2 (CJ)

TO-220AB



Marking Diagram:



Where XXXXX is YYWWL

SBR = Device Type
60 = Forward Current (60A)
100 = Reverse Voltage (100V)
CT = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

| Device | Package | Shipping |
|------------|--------------------|---------------|
| SBR60100CT | TO-220AB (Pb-Free) | 50 pcs / 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} | - | 100 | V |
| Max. Average Forward | $I_{F(AV)}$ | 50% duty cycle @ $T_C = 133^\circ\text{C}$, rectangular wave form | 60 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | Surge applied at rated load conditions halfwave, single phase,60Hz | 400 | A |



Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------------------|----------|---|--------|-------|
| Max. Forward Voltage Drop (per leg) * | V_{F1} | @ 30 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.85 | V |
| | V_{F2} | @ 30 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.80 | V |
| Max. Reverse Current (per leg) * | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$ | 1.0 | mA |
| | I_{R2} | @ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$ | 15 | mA |
| Max. Junction Capacitance (per leg) | C_T | @ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ | 800 | pF |
| Max. Voltage Rate of Change | dv/dt | - | 10,000 | V/ s |

* Pulse Width < 300 μ s, Duty Cycle <2%

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|---|-----------------|--------------------------------------|---------------|--------------------|
| Max. Junction Temperature | T_J | - | -55 to +200 | $^\circ\text{C}$ |
| Max. Storage Temperature | T_{stg} | - | -55 to +200 | $^\circ\text{C}$ |
| Maximum Thermal Resistance Junction to Case | $R_{\theta JC}$ | DC operation | 3.0 | $^\circ\text{C/W}$ |
| Maximum Thermal Resistance, Case to Heat Sink | $R_{\theta JA}$ | DC operation | 50 | $^\circ\text{C/W}$ |
| Maximum Thermal Resistance, Case to Heat Sink | $R_{\theta CS}$ | Mounting surface, smooth and greased | 0.50 | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 2.0 | g |
| Case Style | ITO-220AB | | | |

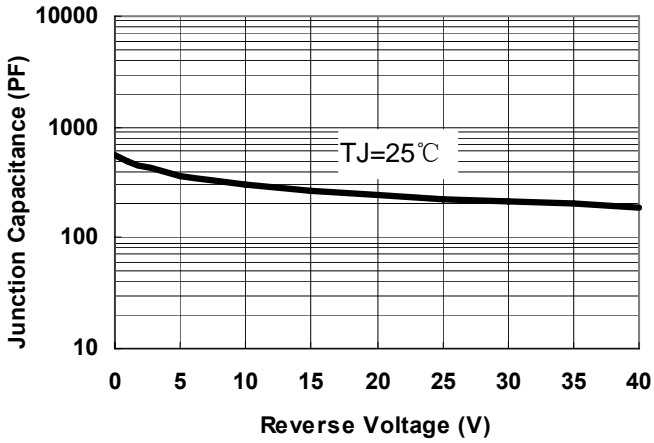


Fig.1-Typical Junction Capacitance

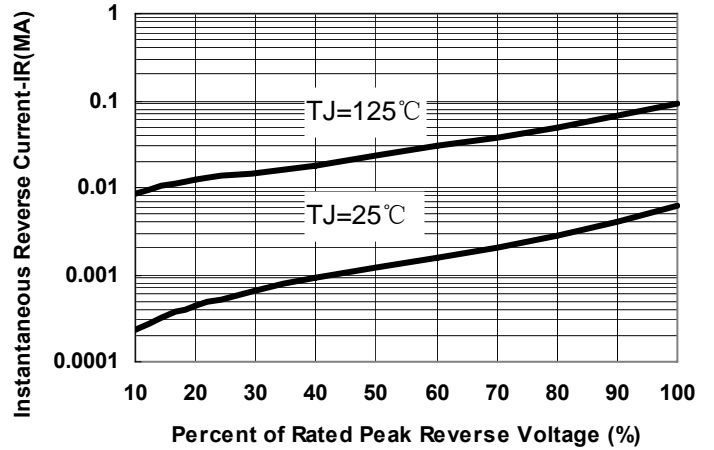


Fig.2-Typical Reverse Characteristics

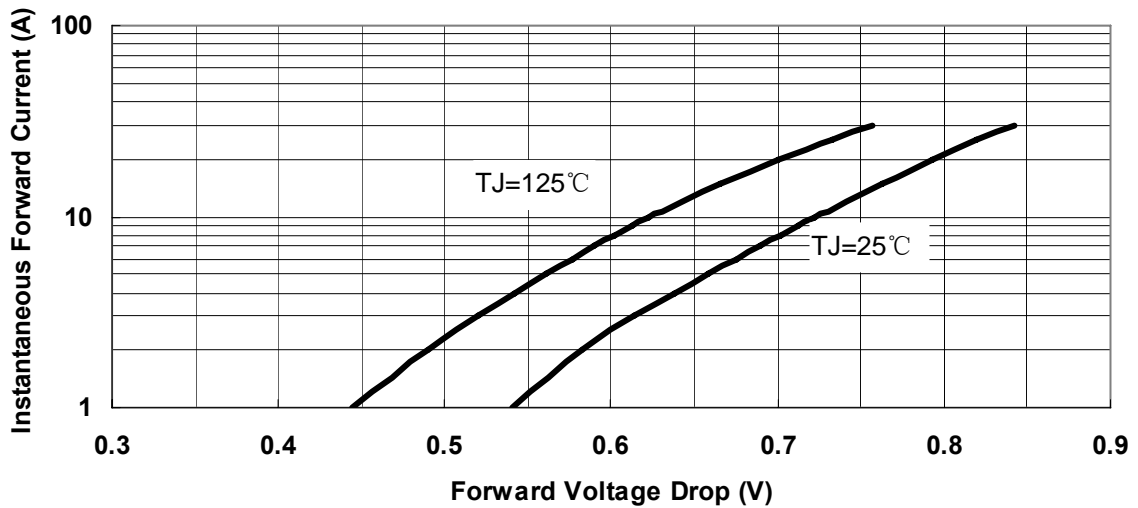


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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