# USB2J

## SURFACE MOUNT FAST SWITCHING RECTIFIER

**VOLTAGE：600V** **CURRENT：2.0A**

GULF SEMI

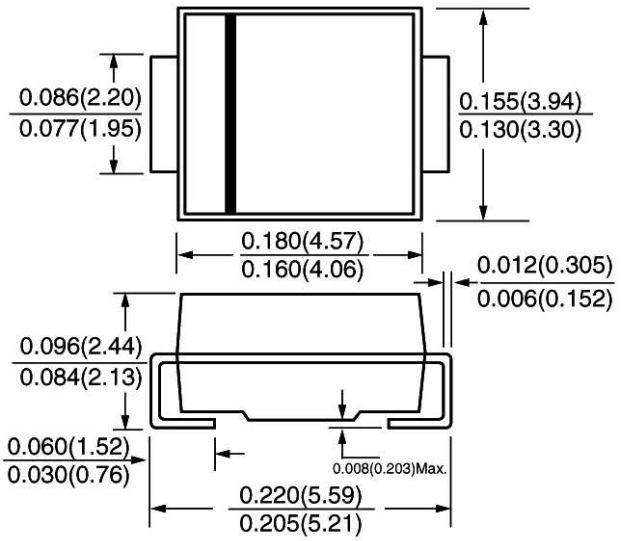
## FEATURE

Ideal for surface mount pick and place application
Low profile package
Built-in strain relief
High surge capability
High temperature soldering guaranteed
260℃/10sec/at terminals
Glass passivated chip
Fast recovery time for high efficiency

## MECHANICAL DATA

Terminal：Plated axial leads solderable per MIL-STD 202E, method 208C
Case：Molded with UL-94 class V-0 recognized Flame Retardant Epoxy
Polarity：color band denotes cathode

**SMB / DO-214AA**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25℃, unless otherwise stated, for capacitive load, derate current by 20%)

| | SYMBOL | USB2J | units |
|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | Vrrm | 600 | V |
| Maximum RMS Voltage | Vrms | 420 | V |
| Maximum DC blocking Voltage | Vdc | 600 | V |
| Maximum Average Forward Rectified | If(av) | 2.0 | A |
| Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load | Ifsm | 90.0 | A |
| Maximum Instantaneous Forward Voltage at rated forward current | Vf | 1.6 | V |
| Maximum DC Reverse Current Ta =25℃<br>at rated DC blocking voltage Ta =125℃ | Ir | 5.0<br>100.0 | μA |
| Maximum Reverse Recovery Time (Note1 ) | Trr | 30 | nS |
| Typical Junction Capacitance (Note 2) | Cj | 45.0 | pF |
| Typical Thermal Resistance (Note 3) | Rth(jl) | 10.0 | ℃/W |
| Storage and Operating Junction Temperature | Tstg, Tj | -55 to +150 | ℃ |

Note：
1. Reverse Recovery Condition If =0.5A, Ir =1.0A, Irr =0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Units mounted on P.C.B with 2.0×2.0″ copper pad areas

## RATINGS AND CHARACTERISTIC CURVES USB2J

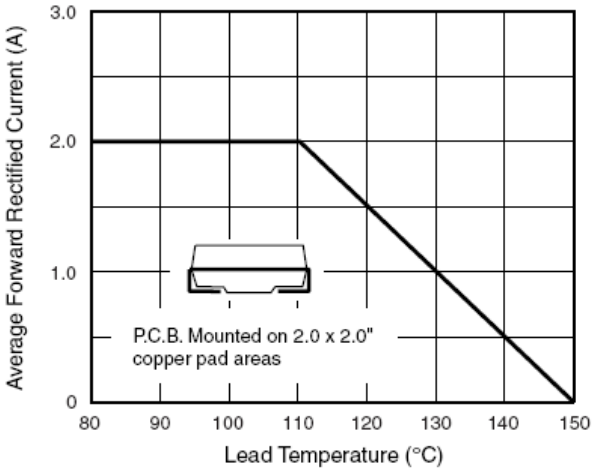



Figure 1. Maximum Forward Current Derating Curve

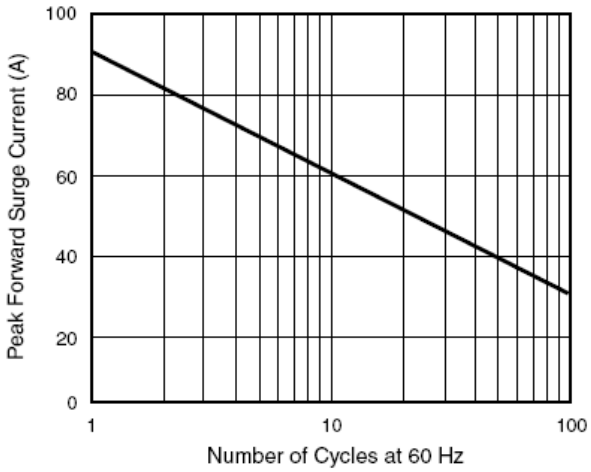



Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

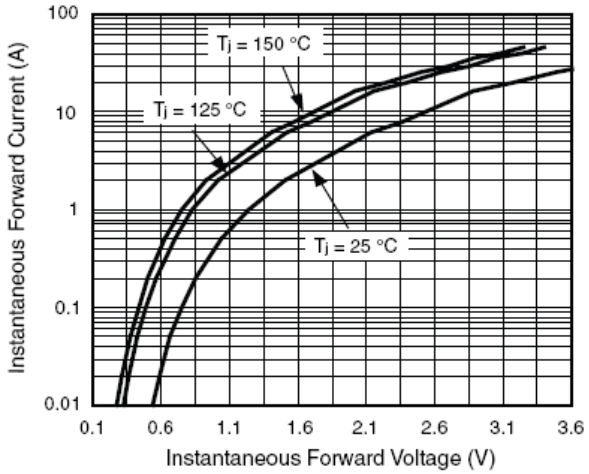



Figure 3. Typical Instantaneous Forward Characteristics

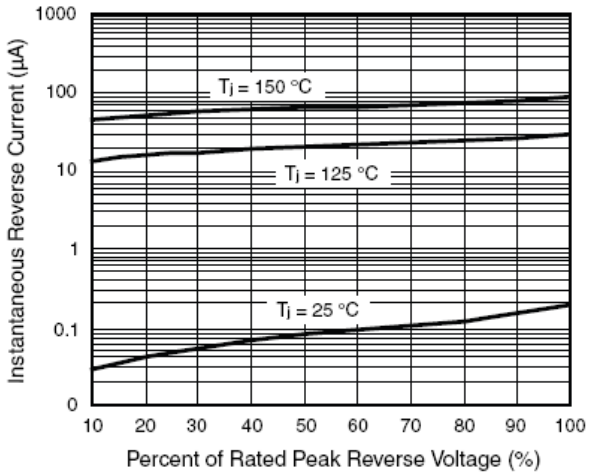



Figure 4. Typical Reverse Leakage Characteristics

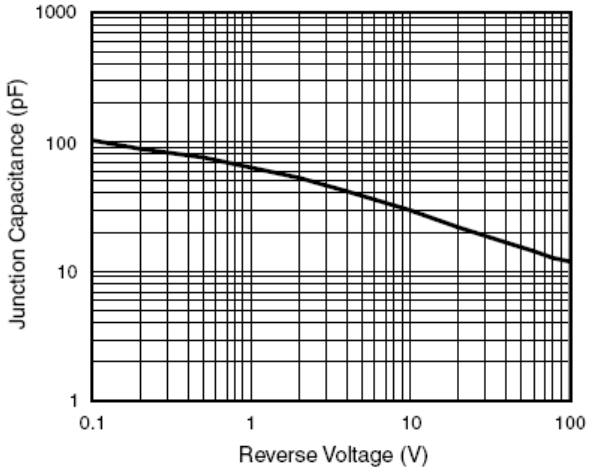



Figure 5. Typical Junction Capacitance