



Surface Mount High Efficiency (Ultra Fast) Glass Passivated Rectifiers

Reverse Voltage - 50 to 1000 Volts
Forward Current - 3.0 Ampere

Features

- Low cost
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

Mechanical Data

- Case: JEDEC SMB Molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

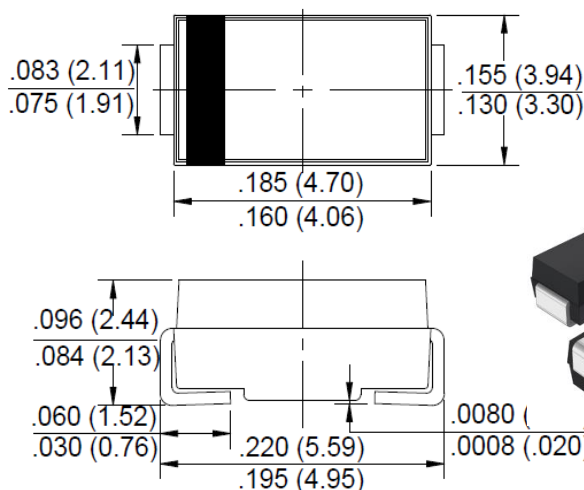
Applications

- For use in SMPS, high frequency inverters, PWM and polarity protection applications

SMB



RoHS COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristics | Symbol | HS3AB | HS3BB | HS3DB | HS3GB | HS3JB | HS3KB | HS3MB | Unit |
|----------------------------------------------------------------------------------------------------|-------------------|-------------|-------|-------|-------|-------|-------|-------|------|
| | | UF3AB | UF3BB | UF3DB | UF3GB | UF3JB | UF3KB | UF3MB | |
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current @T _A =55 °C | I _(AV) | 3.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method) | I _{FSM} | 100 | | | | | | | A |
| Peak Forward Voltage at 3.0 A DC | V _F | 1.0 | | 1.3 | | 1.7 | | | V |
| Maximum DC Reverse Current at Rated @ T _J =25°C | I _R | 5.0 | | | | | | | µA |
| DC Blocking Voltage @T _J =100°C | | 100 | | | | | | | |
| Maximum Reverse Recovery Time (Note 1) | T _{RR} | 50 | | | | 75 | | | nS |
| Typical Junction Capacitance (Note2) | C _J | 50 | | | | 30 | | | pF |
| Typical Thermal Resistance Junction to Lead | R _{θJL} | 15 | | | | | | | °C/W |
| Operating Junction Temperature Range | T _J | -55 to +150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | | | | | °C |

Notes: 1.Measured with I_F=0.5A,I_R=1A,IRR=0.25A.

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

3.The typical data above is for reference only.



Fig. 1 - Forward Current Derating Curve

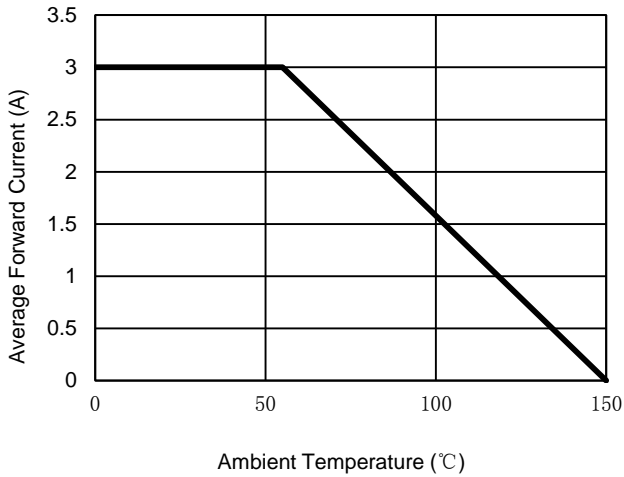


Fig. 2 - Maximum Non-Repetitive Surge Current

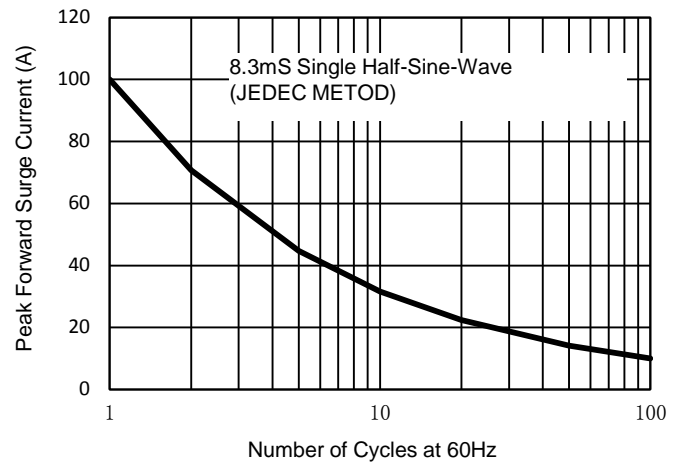


Fig. 3 - Typical Junction Capacitance

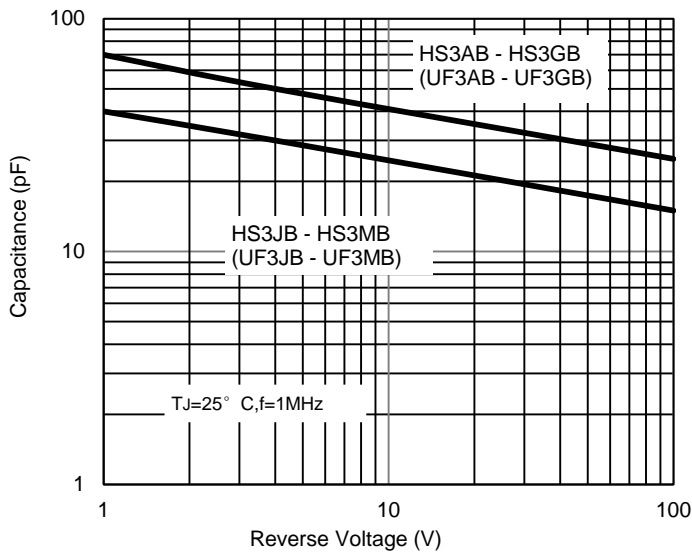


Fig. 4 - Typical Forward Characteristics

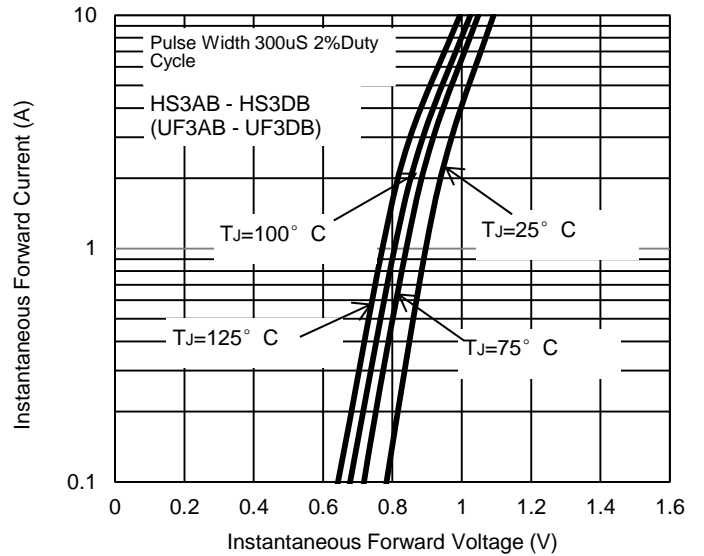


Fig. 5 - Typical Forward Characteristics

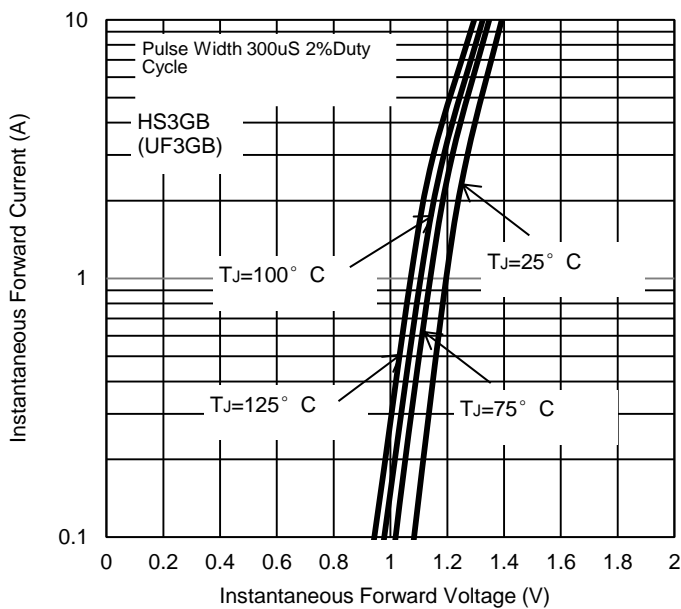
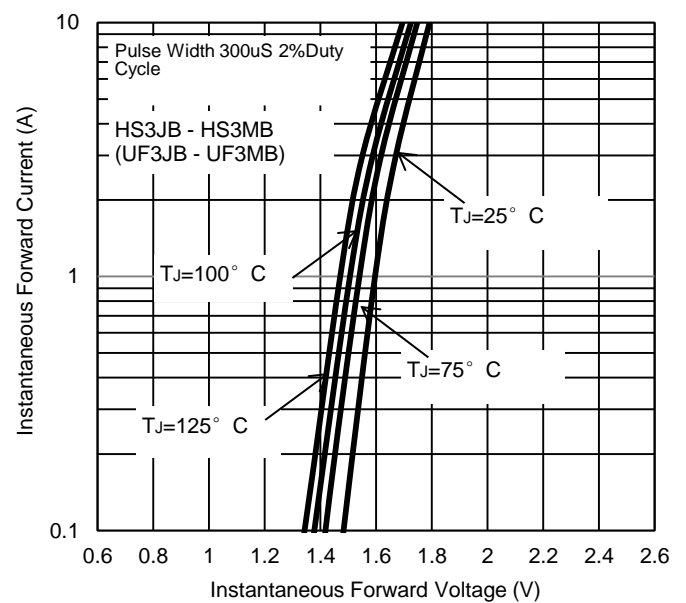


Fig. 6 - Typical Forward Characteristics





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