

UDB151 THRU UDB157

SINGLE PHASE 1.5AMP SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

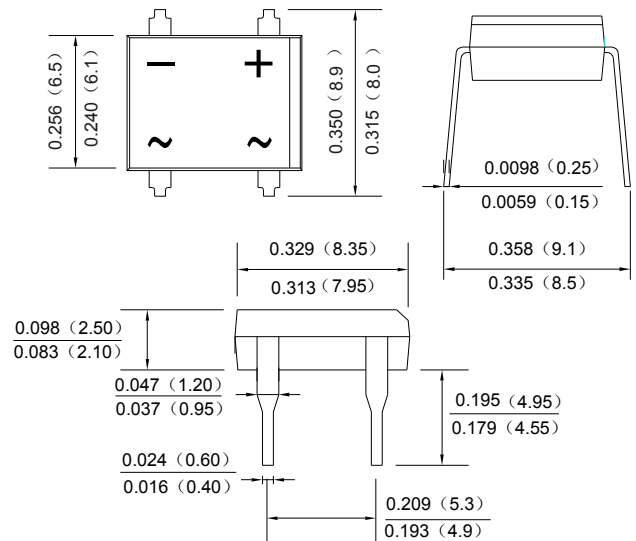
Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Designed for surface mount application
- Plastic material-UL flammability 94V-0

Mechanical Data

- Case: DB-M, molded plastic
- Terminals: plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting position: Any
- Marking: type number
- Lead Free: For RoHS / Lead Free Version

DB-M



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%.

| TYPE NUMBER | SYMBOL | UDB151 | UDB152 | UDB153 | UDB154 | UDB155 | UDB156 | UDB157 | UNITS | |
|---|-----------------|-----------|--------|--------|--------|--------|--------|--------|------------|--------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} | | | | | | | | V | |
| | V_{RWM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | | |
| | V_{DC} | | | | | | | | | |
| RMS Reverse Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Average Rectified Output Current (Note 1)@ $T_A=40^\circ C$ | I_o | 1.5 | | | | | | | A | |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 55 | | | | | | | A | |
| Forward Voltage per element @ $I_F=1.5A$ | V_{FM} | 1.0 | | 1.3 | | 1.7 | | | V | |
| Peak Reverse Current @ $T_A=25^\circ C$ At Rated DC Blocking Voltage @ $T_A=125^\circ C$ | I_R | | | | 5.0 | | | 500 | | μA |
| Maximum reverse recovery time (Note 3) | T_{RR} | 50 | | | | 75 | | | ns | |
| Typical Junction Capacitance per leg (Note 2) | C_J | | | | 25 | | | | | pF |
| Typical Thermal Resistance per leg | $R_{\theta JA}$ | | | | 40 | | | | | $^\circ C/W$ |
| | $R_{\theta JL}$ | | | | 15 | | | | | |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55to+150 | | | | | | | $^\circ C$ | |

Note:1. Mounted on glass epoxy PC board with 1.3mm² solder pad.

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

Fig. 1 Output Current Derating Curve

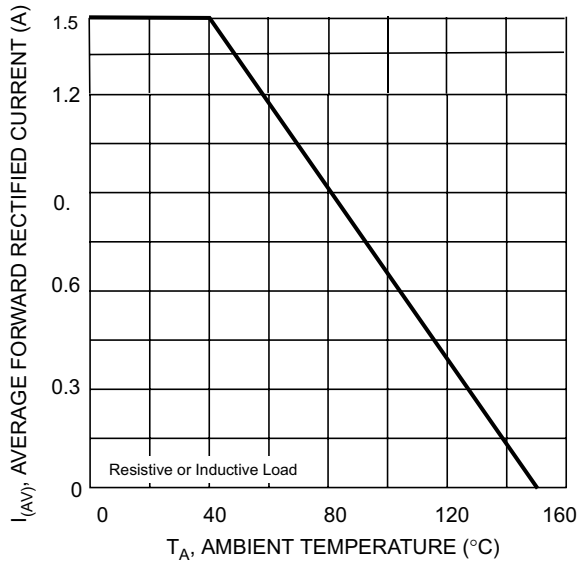


Fig. 2 Typical Forward Characteristics (per leg)

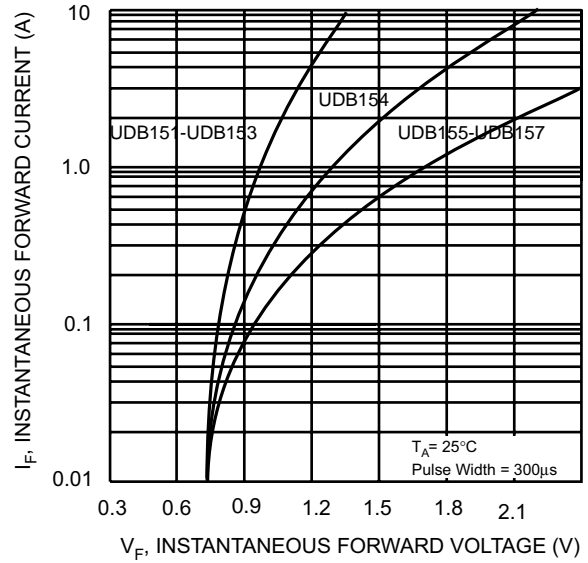


Fig. 3 Maximum Peak Forward Surge Current (per leg)

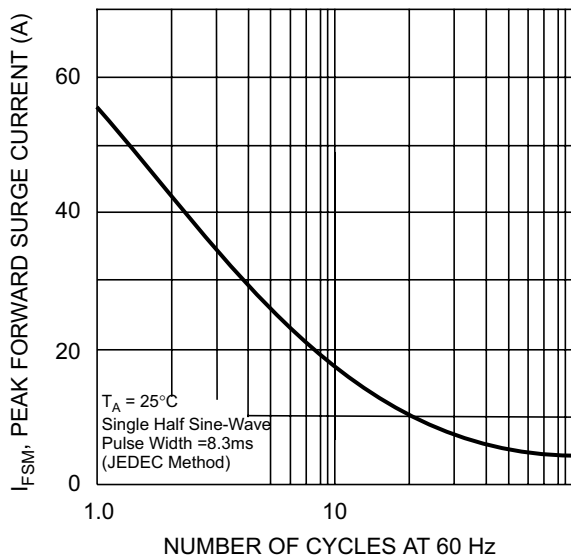


Fig. 4 Typical Reverse Characteristics (per element)

