



Fast Recovery Rectifiers

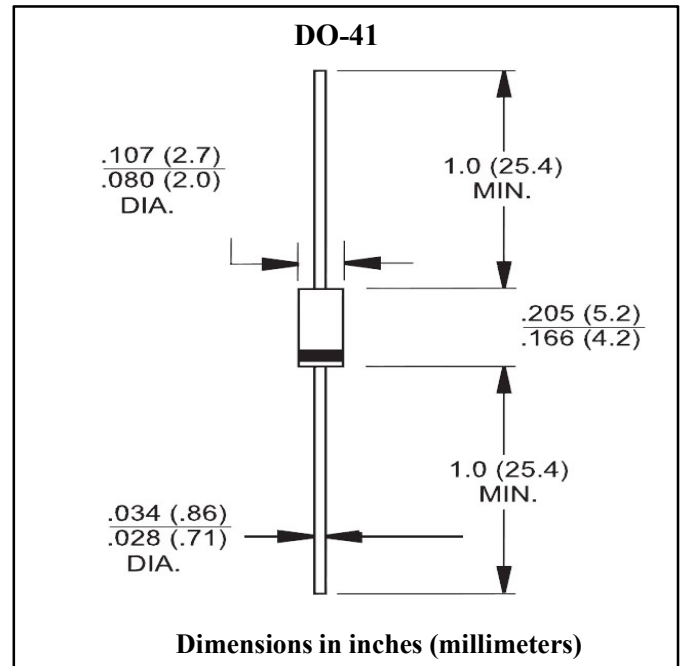
Reverse Voltage 50 to 600 Volts Forward Current 1.0 Ampere

Features

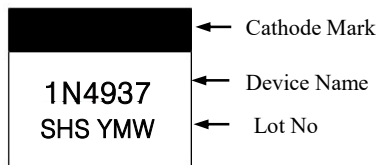
- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

Mechanical Data

- Case : Molded plastic
- Epoxy : UL 94V-0 rate flame retardant
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity : Color band denotes cathode end
- High temperature soldering guaranteed : 260°C/10 seconds/0.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Weight : 0.34 gram



Marking



Maximum Ratings & Electrical Characteristics

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

| Parameter | Symbol | 1N4933 | 1N4934 | 1N4935 | 1N4936 | 1N4937 | Unit | Remark |
|---|------------|-------------|--------|--------|--------|--------|------|------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | V | |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | V | |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | V | |
| Maximum Average Forward Rectified Current 0.375"(9.5mm) Lead Length | $I_{(AV)}$ | 1.0 | | | | | A | |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 30 | | | | | A | |
| Maximum Instantaneous Forward Voltage | V_F | 1.2 | | | | | V | $I_F=1.0A$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 5.0 | | | | | uA | Ta=25°C |
| | | 50 | | | | | | Ta=100°C |
| Maximum Reverse Recovery Time | t_{rr} | 200 | | | | | ns | Note 1 |
| Typical Junction Capacitance | C_J | 15.0 | | | | | pF | Note 2 |
| Operation Junction Temperature Range | T_J | -50 to +150 | | | | | °C | |
| Storage Temperature Range | T_{STG} | -50 to +150 | | | | | °C | |

Note 1. Reverse Recovery Time Test Conditions : $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

Note 2. Measured at 1MHz and Applied Reverse Voltage of 4.0Volts D.C.

Ratings and Characteristics Curves (Ta=25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

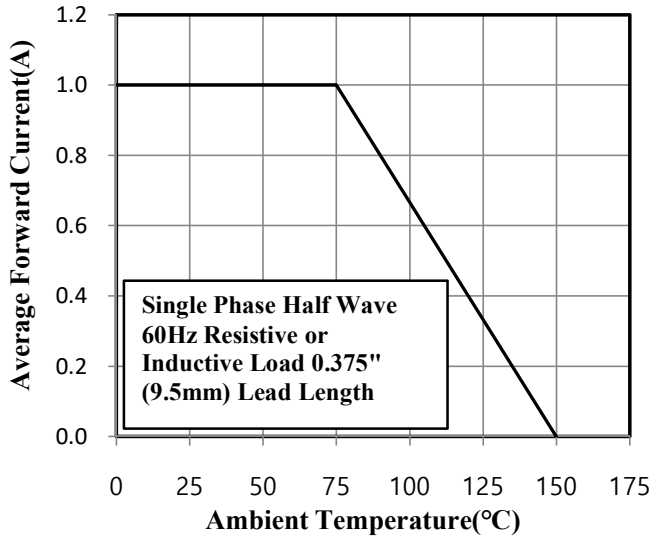


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

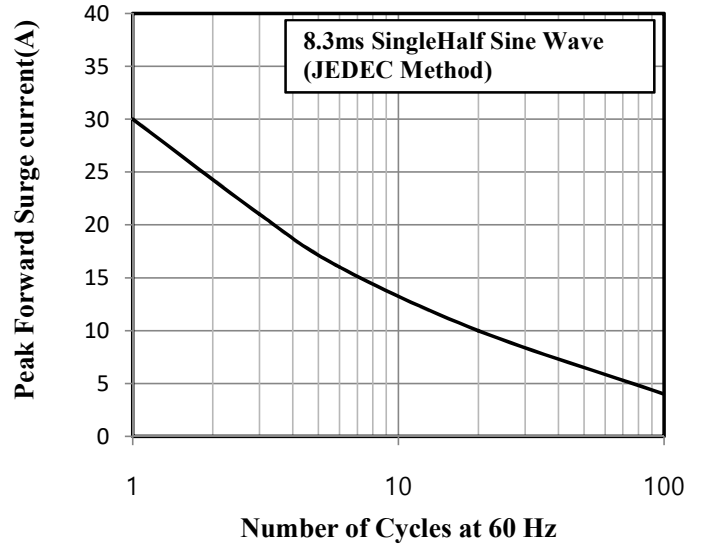


Fig.3 Typical Instantaneous Forward Characteristics

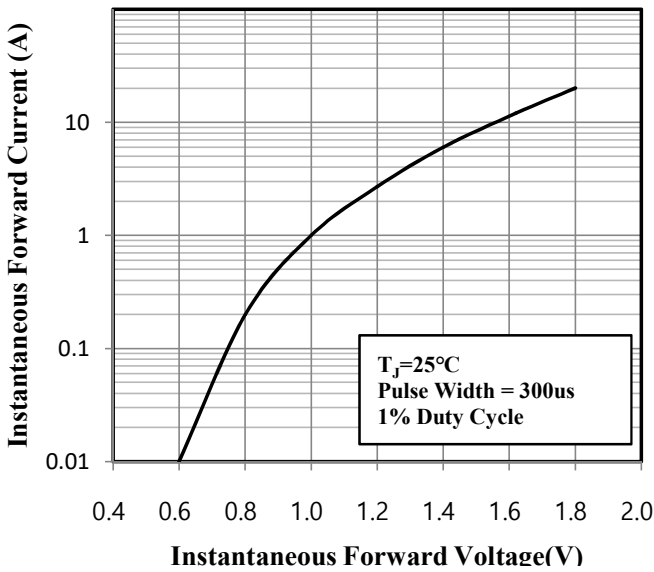


Fig.4 Typical Junction Capacitance

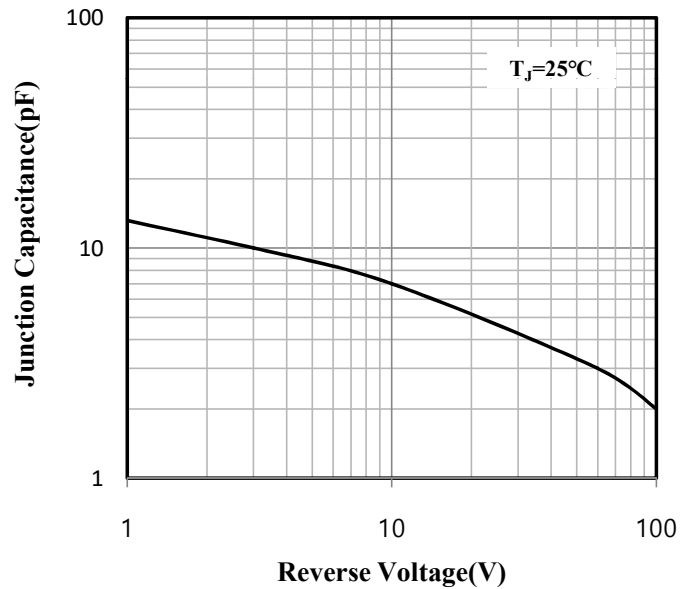


Fig.5 Typical Reverse Characteristics

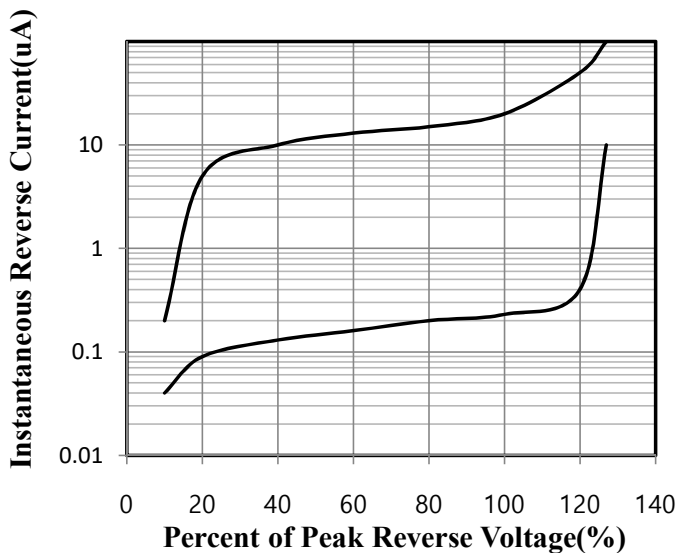


Fig. 6 Reverse Recovery Time Characteristic and Test Circuit Diagram

