

UF4001 ~ UF4007

PRV : 50 ~ 1000 Volts
Io : 1.0 Ampere

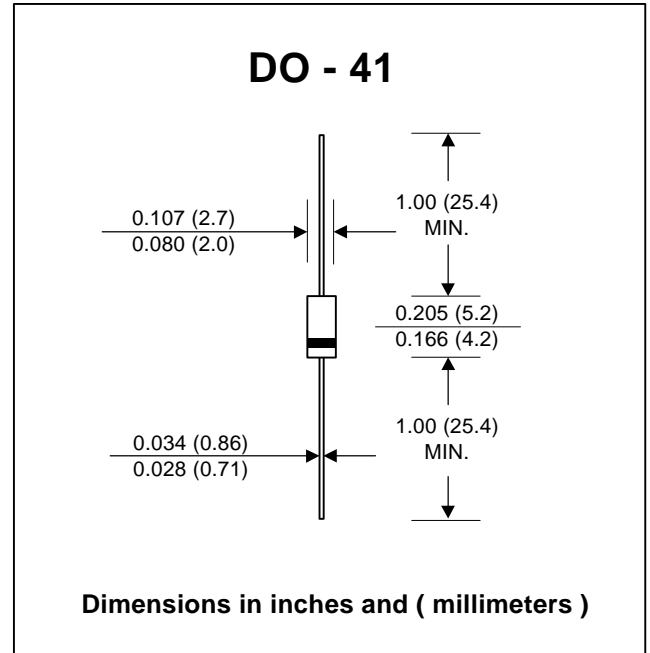
FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : DO-41 Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.34 gram

ULTRAFAST EFFICIENT RECTIFIER DIODES



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

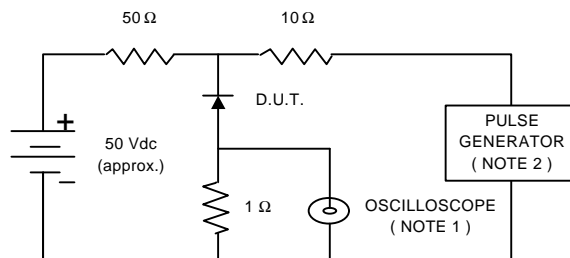
Rating at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

| RATING | SYMBOL | UF 4001 | UF 4002 | UF 4003 | UF 4004 | UF 4005 | UF 4006 | UF 4007 | UNIT |
|-----------------------------------------------------------------------------------------------------------------|--------|---------------|---------|---------|---------|---------|---------|---------|------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C | IF(AV) | 1.0 | | | | | | | A |
| Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method) | IFSM | 30 | | | | | | | A |
| Maximum Forward Voltage at IF = 1.0 A | VF | 1.0 | | | | 1.7 | | | V |
| Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C | IR | 10 | | | | | | | µA |
| | IR(H) | 50 | | | | | | | µA |
| Maximum Reverse Recovery Time ⁽¹⁾ | Trr | 50 | | | | 75 | | | ns |
| Typical Junction Capacitance ⁽²⁾ | CJ | 17 | | | | | | | pf |
| Typical Thermal Resistance ⁽³⁾ | RθJA | 60 | | | | | | | °C/W |
| Junction Temperature Range | TJ | - 65 to + 150 | | | | | | | °C |
| Storage Temperature Range | TSTG | - 65 to + 150 | | | | | | | °C |

Notes : (1) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC
 (3) Thermal Resistance from Junction to Ambient, 0.375" , 9.5 mm Lead Lengths.

RATING AND CHARACTERISTIC CURVES (UF4001 ~ UF4007)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.
 3. All Resistors = Non-inductive Types.

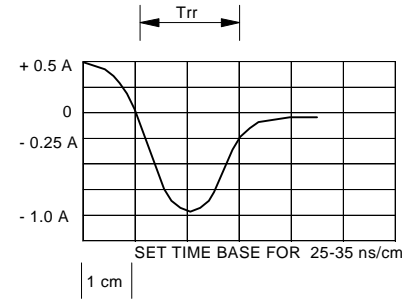


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

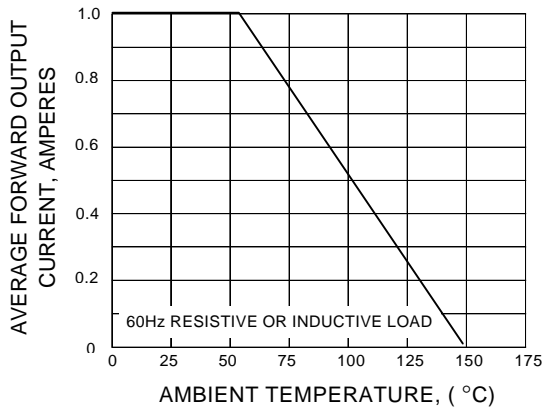


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

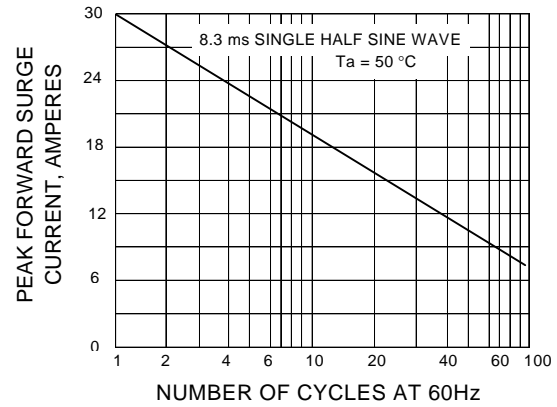


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

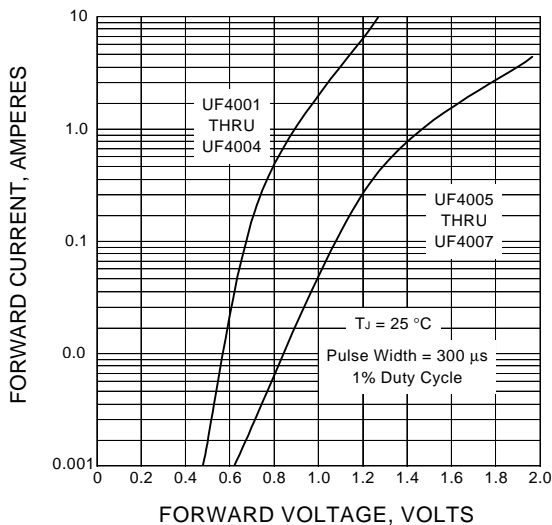


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

