

# UF1001 ~ UF1007

PRV : 50 ~ 1000 Volts

Io : 1.0 Ampere

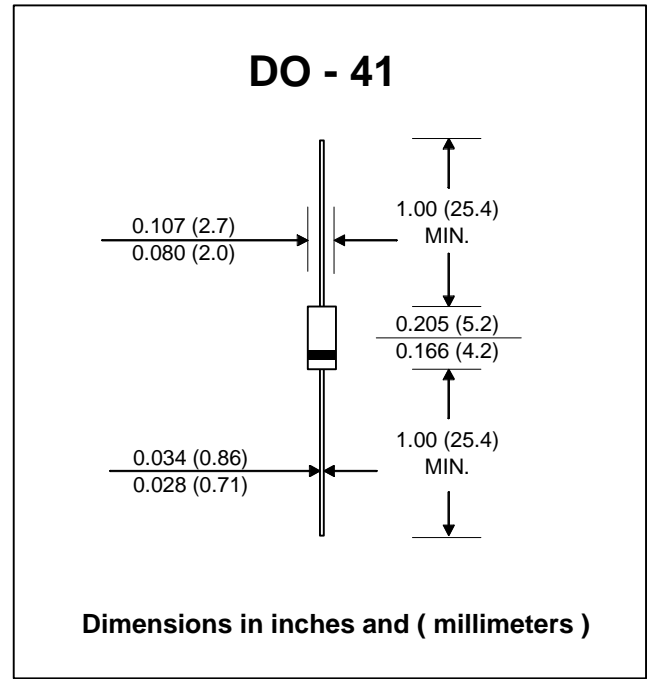
## FEATURES :

- \* 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

# ULTRA FAST RECTIFIER DIODES



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

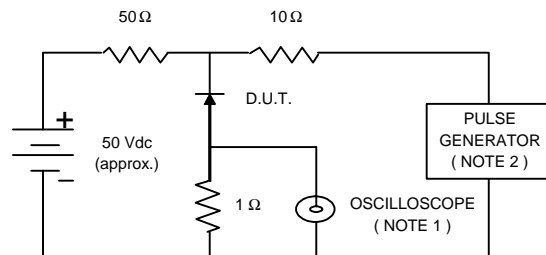
Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

RATING	SYMBOL	UF1001	UF1002	UF1003	UF1004	UF1005	UF1006	UF1007	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	1.1			1.7			V	
Maximum DC Reverse Current Tj = 25 °C	IR	5							µA
at Rated DC Blocking Voltage Tj = 100 °C	IR(H)	100							µA
Maximum Reverse Recovery Time <sup>(1)</sup>	Trr	50				75			ns
Typical Junction Capacitance <sup>(2)</sup>	CJ	20				10			pf
Typical Thermal Resistance <sup>(3)</sup>	RθJA	25							C/W
Junction Temperature Range	TJ	- 55 to + 150							°C
Storage Temperature Range	TSTG	- 55 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.

## RATING AND CHARACTERISTIC CURVES ( UF1001 ~ UF1007 )

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.

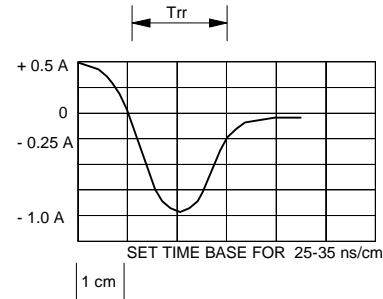


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

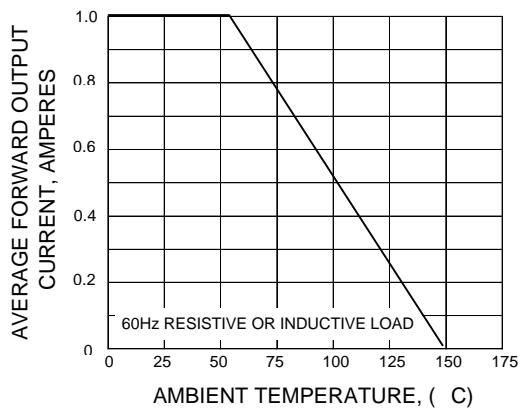


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

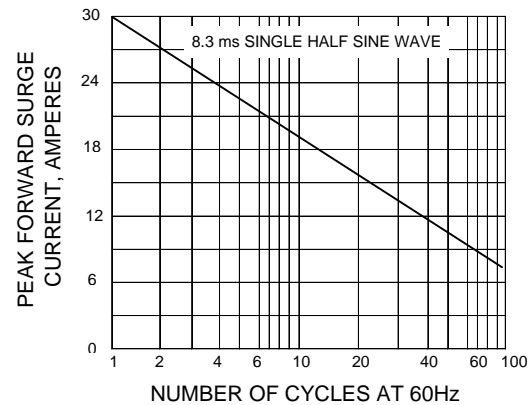


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

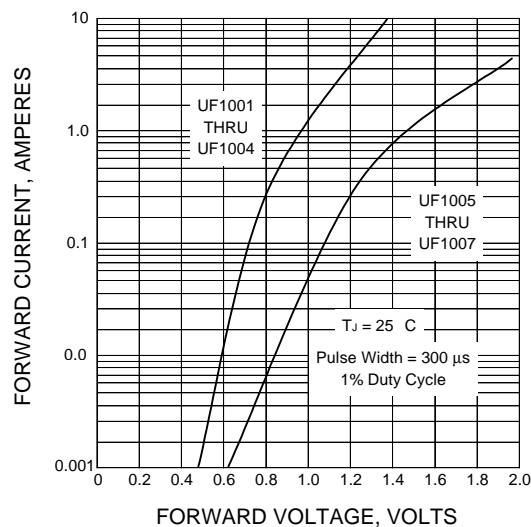


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

