

# UF5400 ~ UF5408

**PRV : 50 ~ 1000 Volts**  
**Io : 3.0 Ampere**

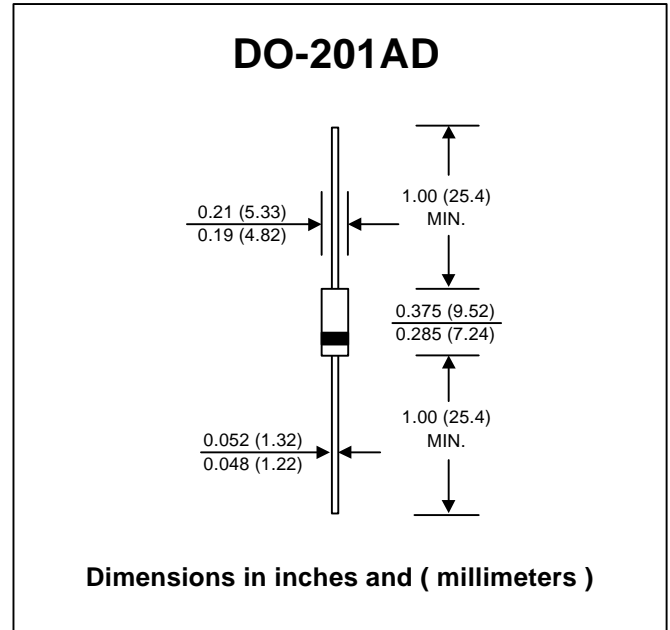
## FEATURES :

- \* 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-201AD 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 : 1.16 grams

# 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 5400	UF 5401	UF 5402	UF 5403	UF 5404	UF 5405	UF 5406	UF 5407	UF 5408	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	500	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	350	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	500	600	800	1000	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 55^\circ C$	$I_{F(AV)}$	3.0									A
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method) , $T_a = 55^\circ C$	$I_{FSM}$	150									A
Maximum Forward Voltage at $I_F = 3.0 A$	$V_F$	1.0						1.7			V
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Blocking Voltage $T_a = 100^\circ C$	$I_R$	10									$\mu A$
	$I_R(H)$	75						200			$\mu A$
Maximum Reverse Recovery Time <sup>(1)</sup> $T_J = 25^\circ C$	$T_{rr}$	50						75			ns
Typical Junction Capacitance <sup>(2)</sup>	$C_J$	45						36			pf
Typical Thermal Resistance <sup>(3)</sup>	$R_{\theta JA}$	20									$^\circ C/W$
Junction Temperature Range	$T_J$	- 65 to + 150									$^\circ C$
Storage Temperature Range	$T_{STG}$	- 65 to + 150									$^\circ C$

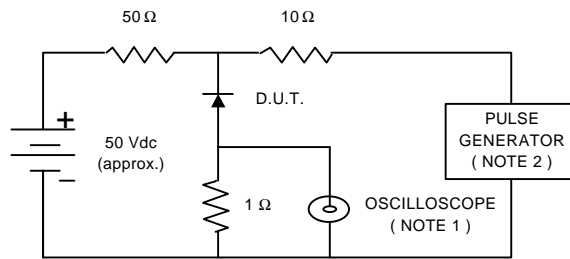
**Notes :** (1) Reverse Recovery Test Conditions :  $I_F = 0.5 A$ ,  $I_R = 1.0 A$ ,  $I_{rr} = 0.25 A$ .

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V<sub>DC</sub>

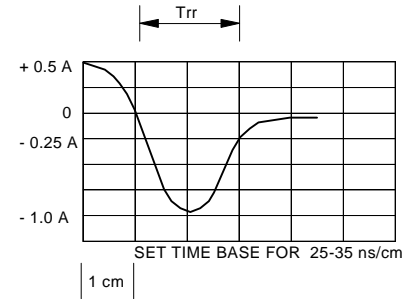
(3) Thermal Resistance from Junction to ambient with 0.375"(9.5mm) lead length, both leads attached to heatsink.

## RATING AND CHARACTERISTIC CURVES ( UF5400 ~ UF5408 )

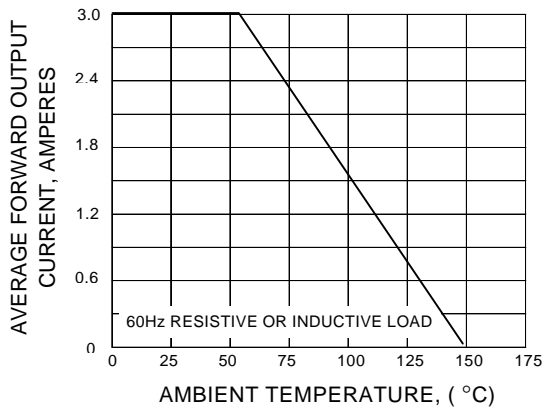
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



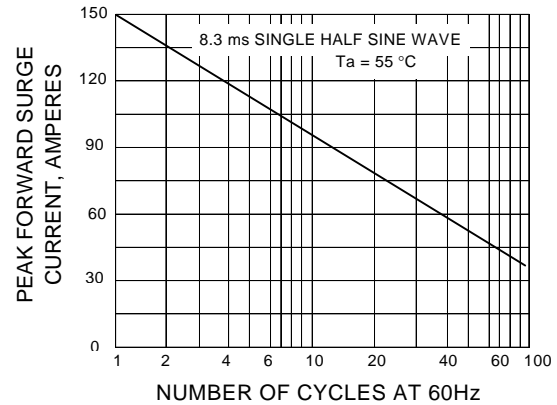
NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.



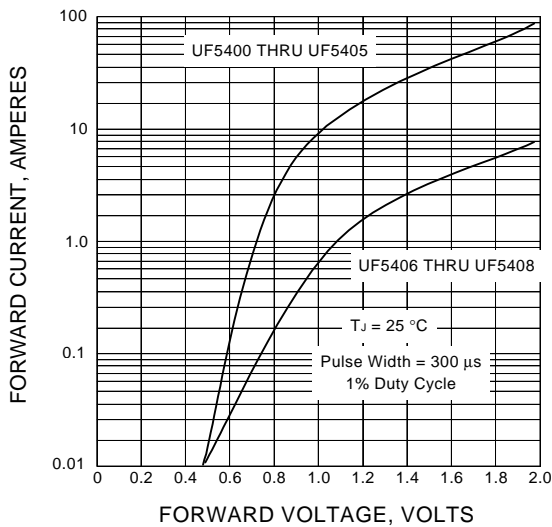
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

