

UF5400 ~ UF5408

PRV : 50 ~ 1000 Volts
Io : 3.0 Ampere

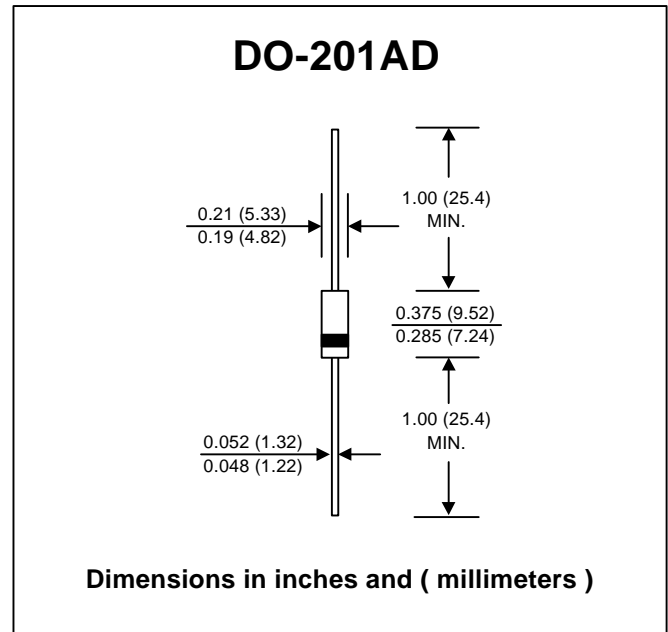
FEATURES :

- * 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									μA
	$I_R(H)$	75						200			μA
Maximum Reverse Recovery Time ⁽¹⁾ $T_J = 25^\circ C$	T_{rr}	50						75			ns
Typical Junction Capacitance ⁽²⁾	C_J	45						36			pf
Typical Thermal Resistance ⁽³⁾	$R_{\theta JA}$	20									$^\circ C/W$
Junction Temperature Range	T_J	- 65 to + 150									$^\circ C$
Storage Temperature Range	T_{STG}	- 65 to + 150									$^\circ C$

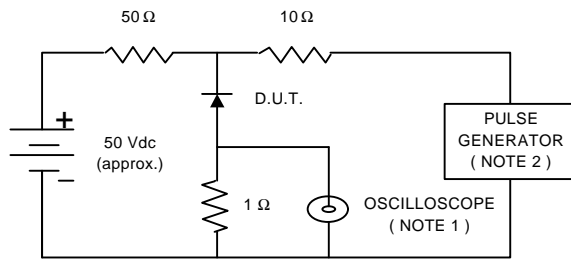
Notes : (1) Reverse Recovery Test Conditions : $I_F = 0.5 A$, $I_R = 1.0 A$, $I_{rr} = 0.25 A$.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}

(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.

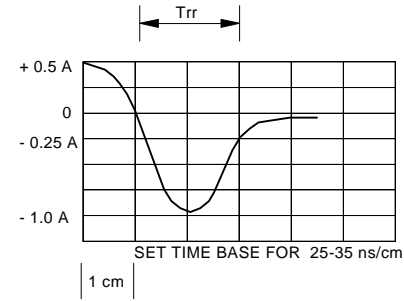


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

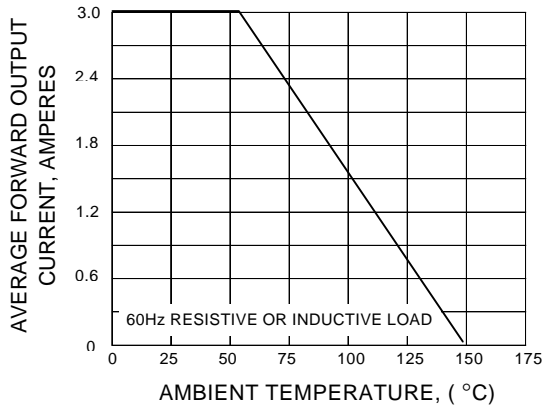


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

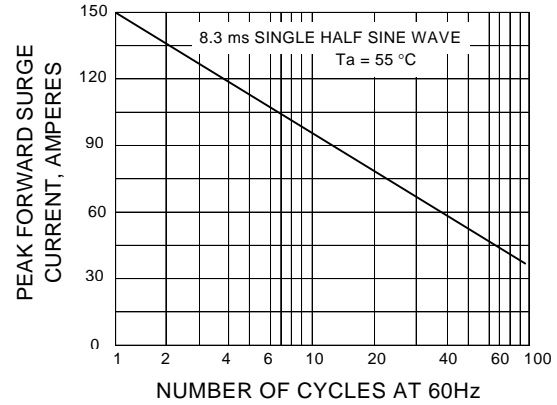


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

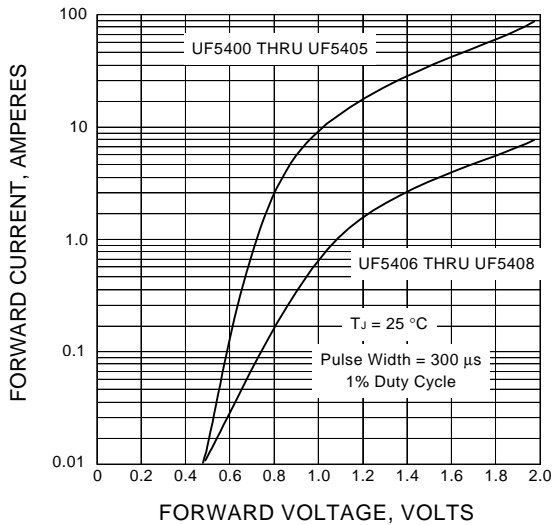


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

