

# 1N5807 - 1N5811

**PRV : 50 - 150 Volts**  
**I<sub>o</sub> : 6.0 Amperes**

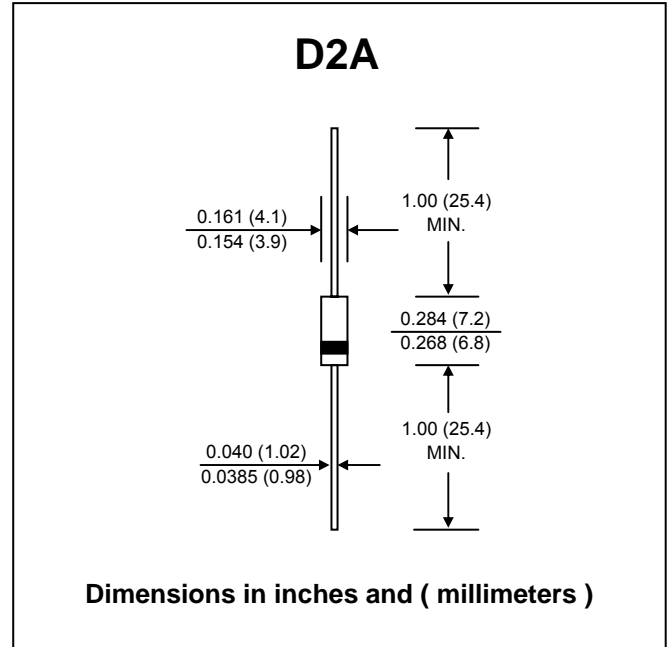
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ultrafast recovery time
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : D2A 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 : 0.645 gram

## ULTRAFAST RECOVERY RECTIFIER DIODES



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

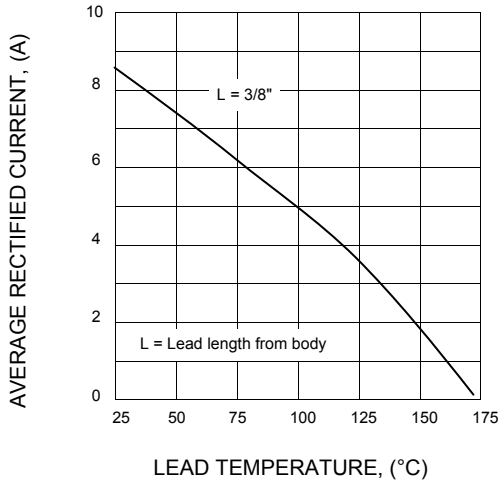
RATING	SYMBOL	1N5807	1N5809	1N5811	UNIT
Maximum Working Peak Reverse Voltage	$V_{RWM}$	50	100	150	V
Minimum Breakdown Voltage @ 100 $\mu$ A	$V_{BR(Min)}$	60	110	160	V
Maximum Average Forward Current	$I_{F(AV)}$	6.0 <sup>(1)</sup>			A
		3.0 <sup>(2)</sup>			
Maximum Forward Surge Current <sup>(3)</sup>	$I_{FSM}$	125			A
Maximum Peak Forward Voltage at $I_F = 4.0$ A.	$V_F$	0.875			V
Maximum Reverse Current at $V_{RWM}$	$I_R$	5.0			$\mu$ A
	$I_{R(H)}$	150			
Maximum Reverse Recovery Time <sup>(4)</sup>	$T_{rr}$	30			ns
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	22			$^{\circ}$ C/W
Junction Temperature Range	$T_J$	- 65 to + 175			$^{\circ}$ C
Storage Temperature Range	$T_{STG}$	- 65 to + 175			$^{\circ}$ C

### Notes :

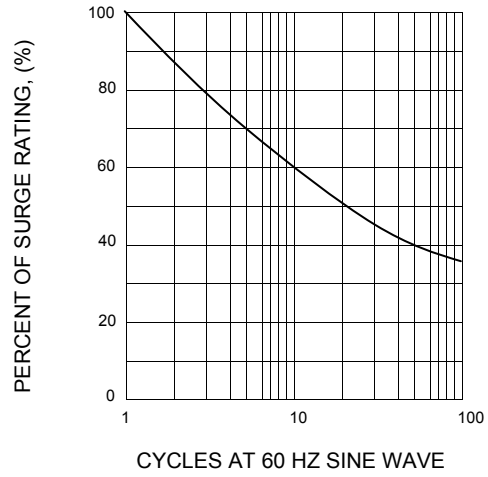
- (1) Rated at  $T_L=75$  °C at 3/8 inc lead length. Derate at 60 mA/ $^{\circ}$ C for  $T_L$  above 75 °C.
- (2) Derate linearly at 25 mA/ $^{\circ}$ C above  $T_a = 55$  °C. This rating is typical for PC boards where thermal resistance from mounting point to ambient is sufficiently controlled where  $T_{J(max)}$  dose not exceed 175 °C.
- (3)  $T_a = 25$  °C @  $I_{F(AV)} = 3$ A and  $V_{RWM}$  for ten 8.3 ms surges at 1 minute intervals.
- (4)  $I_F = 1$ A,  $I_{RM} = 1$ A,  $I_{R(REC)} = 0.1$  A and  $di/dt = 10$  A/ $\mu$ s min.

**RATING AND CHARACTERISTIC CURVES ( 1N5807 - 1N5811 )**

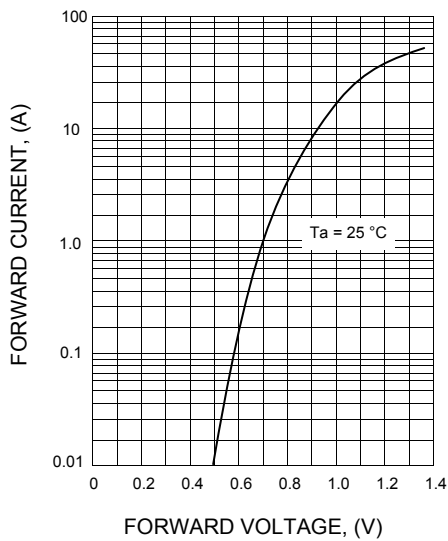
**FIG. 1 - OUTPUT CURRENT VS. LEAD TEMPERATURE**



**FIG.2 - MULTIPLE SURGE CURRENT VS. DURATION**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

