

**Microsemi Corp.**

The diode experts

SANTA ANA, CA

For more information call:  
(714) 979-8220

ALSO  
AVAILABLE IN  
SURFACE  
MOUNT

**1N5807  
thru  
1N5811**



## FEATURES

- MICROMINIATURE PACKAGE
- VOIDLESS HERMETICALLY SEALED GLASS PACKAGE
- TRIPLE LAYER PASSIVATION
- METALLURGICALLY BONDED
- ULTRA FAST RECOVERY
- HIGH SURGE CAPABILITY AND EXTREMELY STABLE CHARACTERISTICS
- PIV TO 160 VOLTS
- JAN/S/TX/TXV TYPES AVAILABLE PER MIL-S-19500/477

## MAXIMUM RATINGS

Operating Temperature:  $-55^{\circ}\text{C}$  to  $+200^{\circ}\text{C}$ .  
Storage Temperature:  $-55^{\circ}\text{C}$  to  $+200^{\circ}\text{C}$ .

## ELECTRICAL CHARACTERISTICS

TYPE	PEAK INVERSE VOLTAGE (MIN.) PIV	BREAKDOWN VOLTAGE (MIN.) $B_V$ @ 100 $\mu\text{A}$	AVERAGE RECTIFIED CURRENT $I_O$	FORWARD VOLTAGE DROP (MAX.) $V_F$		REVERSE CURRENT (MAX.) $I_R$ @ PIV		SURGE CURRENT (MAX.) (NOTE 1) $I_F$ (surge)	JUNCTION CAPACITANCE (MAX.) $C_j$ @ -10 V	REVERSE RECOVERY TIME (MAX.) (NOTE 2)
	VOLTS	VOLTS	AMPS	25°C	100°C	25°C	100°C	AMPS	pF	nsec
1N5807	50	55	6.0	.875	.700	5				30
1N5808	75	80	@	@	@	5				30
1N5809	100	110	$T_L =$ 4Adc	4Adc	6Adc	5	150	125		30
1N5810	125	135	75°C	250	250	5	@	Single	50	30
1N5811	150	160	( $L = \frac{3}{4}$ " ) msec pulse width	msec pulse width	msec pulse width	5	75°C	cycle 8.3msec	typ.	30

NOTE 1:  $T_A = 55^{\circ}\text{C}$  @ rated  $I_O$  and  $V_{RM}$ . 10–8.3 msec surges

NOTE 2:  $I_F = 1.0\text{A}$ ,  $I_R = 1.0\text{A}$ , recover to .1A

## ULTRA FAST RECTIFIERS

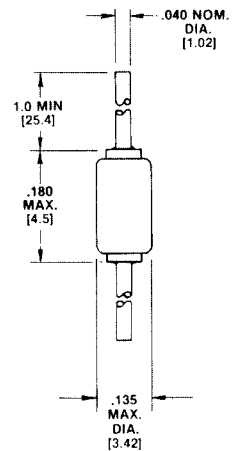


FIGURE 1  
PACKAGE E

## MECHANICAL CHARACTERISTICS

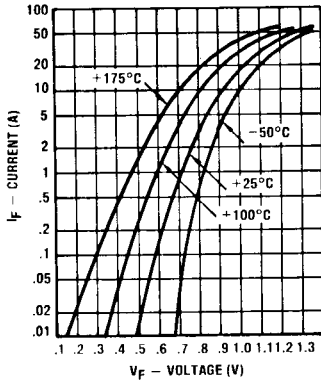
CASE: Hermetically sealed hard glass.

LEAD MATERIAL: Silver clad copper.

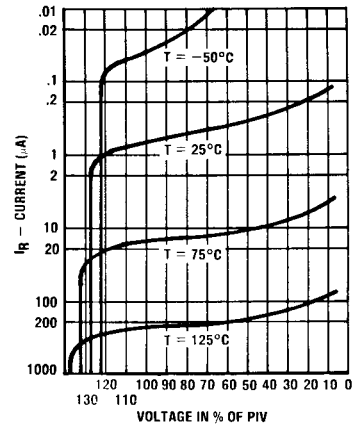
MARKING: Body painted, alpha numeric.

POLARITY: Cathode band.

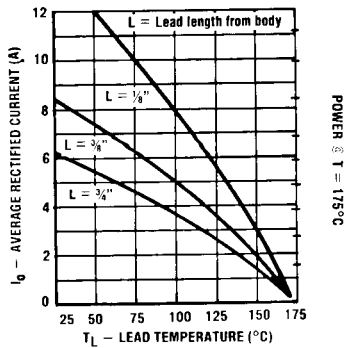
# 1N5807 thru 1N5811



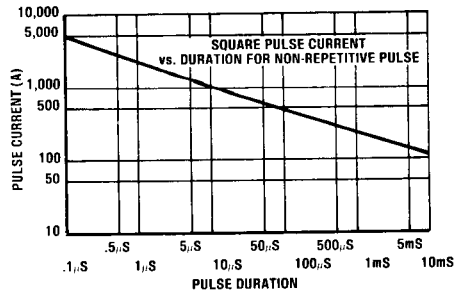
**FIGURE 2**  
TYPICAL FORWARD CURRENT  
vs. FORWARD VOLTAGE



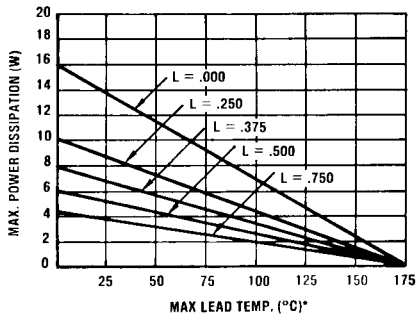
**FIGURE 3**  
TYPICAL REVERSE CURRENT  
vs. VOLTAGE



**FIGURE 4**  
OUTPUT CURRENT vs. LEAD TEMP.

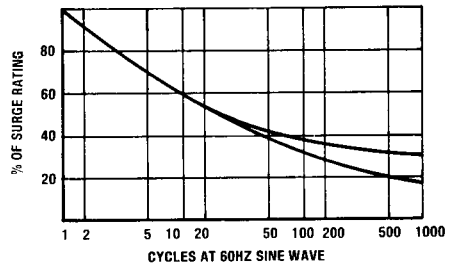


**FIGURE 5**  
FORWARD PULSE CURRENT vs. DURATION



\*Maximum lead temp. in °C ( $T_L$ ) at point "L" from body.  
(For max. operating junction temp. of 175°C with equal  
two-lead conditions.)

**FIGURE 6**  
MAXIMUM LEAD TEMP. vs  $P_d$



**FIGURE 7**  
MULTIPLE SURGE CURRENT vs. DURATION