

**AXIAL LEADED HERMETICALLY SEALED  
 SUPERFAST RECTIFIER DIODE**
**QUICK  
 REFERENCE DATA**

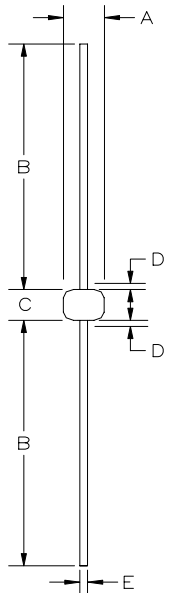
- Very low reverse recovery time
- Hermetical sealed in Metoxillite fused metal oxide
- Low switching losses
- Soft, non-snap off, recovery characteristics
- Very low forward voltage drop

- $V_R = 50 - 150V$
- $I_F = 6.0A$
- $t_{rr} = 30ns$
- $I_R = 5\mu A$

**ABSOLUTE MAXIMUM RATINGS** (@ 25°C unless otherwise specified)

	Symbol	1N5807	1N5809	1N5811	Unit
Working reverse voltage	VRWM	50	100	150	V
Repetitive reverse voltage	VRRM	50	100	150	V
Average forward current (@ 75°C, lead length = 0.375")	IF(AV)	←———— 6.0 —————→			A
Repetitive surge current (@ 55°C in free air, lead length 0.375")	IFRM	←———— 25 —————→			A
Non-repetitive surge current ( $t_p = 8.3ms$ , @ $V_R$ & $T_{jmax}$ )	IFSM	←———— 125 —————→			A
Storage temperature range	TSTG	←———— -65 to +200 —————→			°C
Operating temperature range	TOP	←———— -65 to +175 —————→			°C

**MECHANICAL**



G112

Dimensions					
DIM <sup>N</sup>	Millimeters		Inches		Note
	MIN	MAX	MIN	MAX	
A	2.92	3.61	.115	0.142	-
B	22.9	33.0	0.90	1.30	-
C	3.3	7.62	.130	0.3	-
D	-	0.80	-	.030	1
E	0.91	1.07	0.036	.042	-

Note:  
(1) Lead diameter uncontrolled over this region.

Weight = 0.013oz

These products are qualified to MIL-PRF-19500/477 and are preferred parts as listed in MIL-STD-701. They can be supplied fully released as JANTX, JANTXV, and JANS versions

**ELECTRICAL CHARACTERISTICS** (@ 25°C unless otherwise specified)

	Symbol	1N5807	1N5809	1N5811	Unit
Average forward current max. (pcb mounted; $T_A = 55^\circ\text{C}$ ) for sine wave	$I_{F(AV)}$	← 1.7 →	← 1.7 →	← 1.7 →	A
	$I_{F(AV)}$	← 1.8 →	← 1.8 →	← 1.8 →	A
Average forward current max. ( $T_L = 55^\circ\text{C}$ ; $L = 3/8''$ ) for sine wave	$I_{F(AV)}$	← 5.7 →	← 5.7 →	← 5.7 →	A
	$I_{F(AV)}$	← 6.0 →	← 6.0 →	← 6.0 →	A
$I^2t$ for fusing ( $t = 8.3\text{mS}$ ) max.	$I^2t$	← 32 →	← 32 →	← 32 →	$\text{A}^2\text{S}$
Forward voltage drop max. @ $I_F = 4.0\text{A}$ , $T_j = 25^\circ\text{C}$	$V_F$	← 0.875 →	← 0.875 →	← 0.875 →	V
Reverse current max. @ $V_{RWM}$ , $T_j = 25^\circ\text{C}$ @ $V_{RWM}$ , $T_j = 100^\circ\text{C}$	$I_R$	← 5.0 →	← 5.0 →	← 5.0 →	$\mu\text{A}$
	$I_R$	← 150 →	← 150 →	← 150 →	$\mu\text{A}$
Reverse recovery time max. 1.0A $I_F$ to 1.0A $I_R$ . Recovers to 0.1A $I_{RR}$ .	$t_{rr}$	← 30 →	← 30 →	← 30 →	nS
Junction capacitance typ. @ $V_R = 5\text{V}$ , $f = 1\text{MHz}$	$C_j$	← 60 →	← 60 →	← 60 →	$\rho\text{F}$

**THERMAL CHARACTERISTICS**

	Symbol	1N5807	1N5809	1N5811	Unit
Thermal resistance - junction to lead Lead length = 0.75"	$R_{\theta JL}$	← 22 →	← 22 →	← 22 →	$^\circ\text{C}/\text{W}$
Thermal resistance - junction to amb. on 0.06" thick pcb. 1 oz. copper.	$R_{\theta JA}$	← 90 →	← 90 →	← 90 →	$^\circ\text{C}/\text{W}$

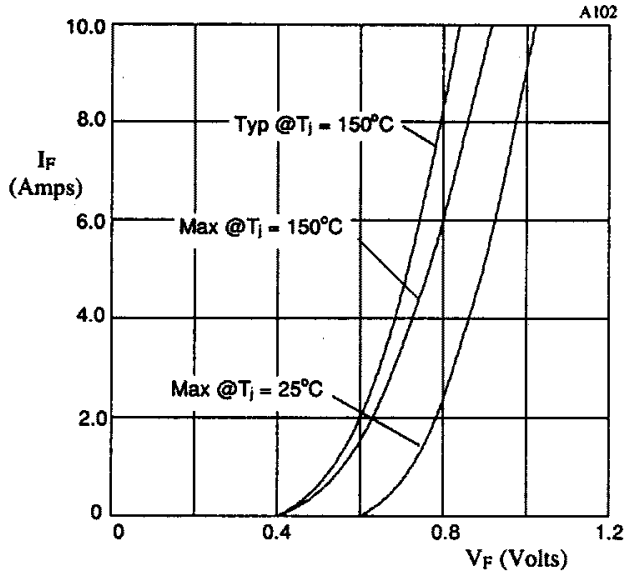


Fig 1. Forward voltage drop as a function of forward current.

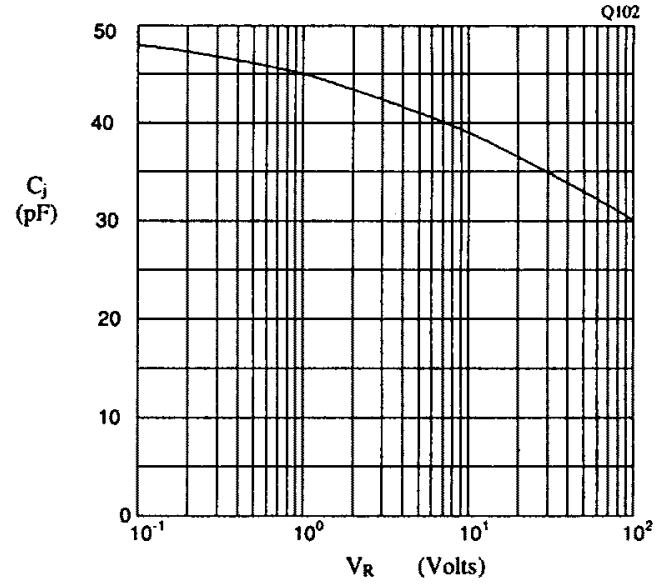


Fig 2. Typical junction capacitance as a function of reverse voltage.

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