Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

TEL:805-498-2111 FAX:805-498- 3804 WEB:http://www.semtech.com

AXIAL LEADED HERMETICALLY SEALED SUPERFAST RECTIFIER DIODE

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

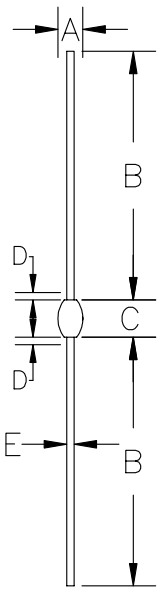
QUICK REFERENCE DATA

- V_R = 50 - 150V
- I_F = 2.5A
- t_{rr} = 25nS
- I_R = 1µA

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

	Symbol	1N5802	1N5804	1N5806	Unit
Working reverse voltage	V_{RWM}	50	100	150	V
Repetitive reverse voltage	V_{RRM}	50	100	150	V
Average forward current (@ 75°C, lead length = 0.375")	$I_{F(AV)}$	←	2.5	→	A
Repetitive surge current (@ 55°C in free air, lead length 0.375")	I_{FRM}	←	14	→	A
Non-repetitive surge current (t_p = 8.3mS, @ V_R & T_{jmax})	I_{FSM}	←	35	→	A
Storage temperature range	T_{STG}	←	-65 to +200	→	°C
Operating temperature range	T_{OP}	←	-65 to +175	→	°C

MECHANICAL



G111

Dimensions					
DIM[N]	Millimeters		Inches		Note
	MIN	MAX	MIN	MAX	
A	1.65	2.16	0.065	0.085	-
B	17.8	33.0	0.70	1.30	-
C	3.18	6.35	0.125	0.250	-
D	-	0.80	-	0.030	1
E	0.69	0.81	0.027	0.032	-

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

Weight = 0.013oz

These products are qualified to MIL-PRF-19500/477 and are prefered 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	1N5802	1N5804	1N5806	Unit
Average forward current max. (pcb mounted; T_A = 55°C)					
for sine wave	$I_{F(AV)}$	←	1.3	→	A
for square wave (d = 0.5)	$I_{F(AV)}$	←	1.4	→	A
Average forward current max. (T_L = 55°C; L = 3/8")					
for sine wave	$I_{F(AV)}$	←	3.1	→	A
for square wave	$I_{F(AV)}$	←	3.3	→	A
I^2t for fusing (t = 8.3mS) max.	I^2t	←	10.0	→	A^2S
Forward voltage drop max. @ I_F = 1.0A, T_j = 25°C	V_F	←	0.875	→	V
Reverse current max.					
@ V_{RWM}, T_j = 25°C	I_R	←	1.0	→	µA
@ V_{RWM}, T_j = 100°C	I_R	←	50	→	µA
Reverse recovery time max. 1.0A I_F to 1.0A I_R. Recovers to 0.1A I_{RR}.	t_{rr}	←	25	→	nS
Junction capacitance typ. @ V_R = 5V , f = 1MHz	C_j	←	25	→	ρF

THERMAL CHARACTERISTICS

	Symbol	1N5802	1N5804	1N5806	Unit
Thermal resistance - junction to lead Lead length = 0.75"	$R_{\theta JL}$	←	36	→	°C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1 oz. copper.	$R_{\theta JA}$	←	100	→	°C/W

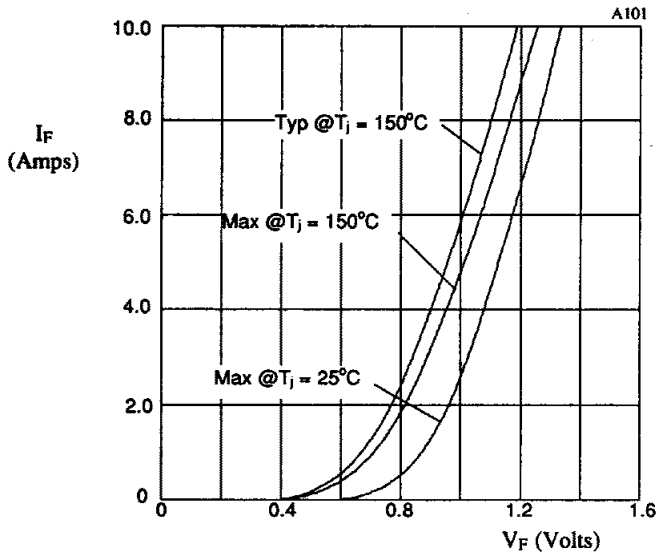


Fig 1. Forward voltage drop as a function of forward current.

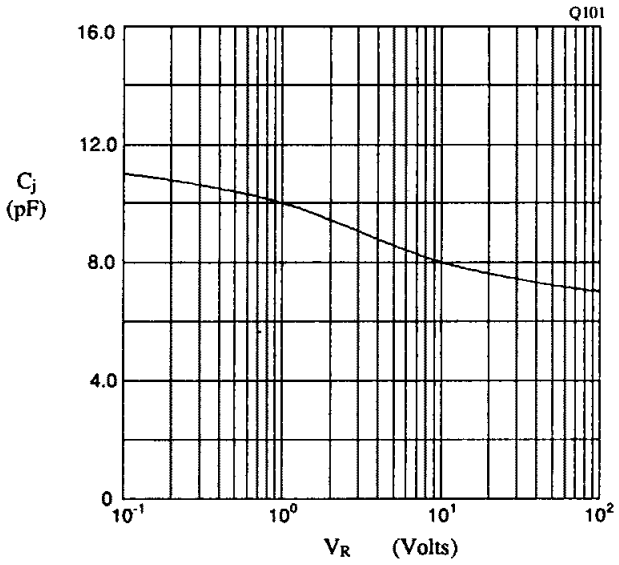


Fig 2. Typical junction capacitance as a function of reverse voltage.