



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

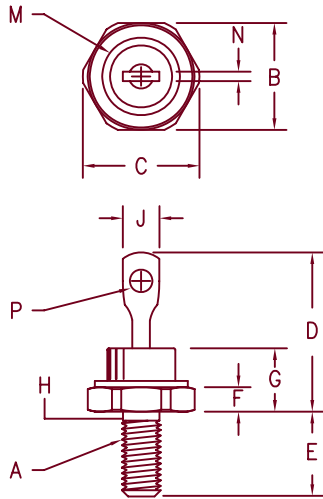
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Ultra Fast Recovery Rectifier 1N5812 — 1N5816



- Notes:
1. 10–32 UNF3A threads
 2. Full threads within 2 1/2 threads
 3. Standard Polarity: Stud is Cathode
Reverse Polarity: Stud is Anode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	---	---	---	---	1
B	.424	.437	10.77	11.10	
C	---	.505	---	12.82	
D	.600	.800	15.24	20.32	
E	.422	.453	10.72	11.50	2
F	.075	.175	1.91	4.44	
G	---	.405	---	10.29	
H	.163	.189	4.15	4.80	
J	---	.250	2.54	3.56	Dia.
M	---	.350	---	8.89	
N	.020	.065	.510	1.65	Dia.
P	.070	.100	1.78	2.54	

D0203AA (D04)

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
1N5812*	50V	50V
1N5813*	75V	75V
1N5814*	100V	100V
1N5815*	125V	125V
1N5816*	150V	150V

*Add Suffix R For Reverse Polarity

- Ultra Fast Recovery Rectifier
- 175°C Junction Temperature
- V_{RRM} – 50 to 150 Volts
- 20 Amps Current Rating

Electrical Characteristics

Average forward current	$I_F(AV)$ 20 Amps	$T_C = 100^\circ\text{C}$, Square wave, $R_{\theta JC} = 1.5^\circ\text{C/W}$
Maximum surge current	I_{FSM} 400 Amps	8.3 ms, half sine $T_C = 100^\circ\text{C}$
Max peak forward voltage	V_{FM} .86 Volts	$I_{FM} = 10\text{A}$: $T_J = 25^\circ\text{C}^*$
Max peak forward voltage	V_{FM} .95 Volts	$I_{FM} = 20\text{A}$: $T_J = 25^\circ\text{C}^*$
Max peak reverse current	I_{RM} 10 μA	V_{RRM} , $T_J = 25^\circ\text{C}$
Max peak reverse current	I_{RM} 1 mA	V_{RRM} , $T_J = 100^\circ\text{C}$
Max reverse recovery time	t_{RR} 35 ns	$I_F = I_R = 1\text{A}$ dc (pk), $I_{(REC)} = 0.1\text{A}$, $di/dt = 85\text{A}/\mu\text{s}$
Max junction capacitance	C_J 300 pF	$V_R = 10\text{V}$, $f = 1\text{MHz}$, $T_J = 25^\circ\text{C}$

*Pulse test: Pulse width 300 μsec , Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	-65°C to 175°C
Operating junction temp range	T_J	-65°C to 175°C
Max thermal resistance	$R_{\theta JC}$	1.5°C/W Junction to case
Mounting torque		12–15 inch pounds
Weight		.16 ounces (5.0 grams) typical



6 Lake Street
Lawrence, MA 01841
PH: (978) 620–2600
FAX: (978) 689–0803
www.microsemi.com

05–03–07 Rev. 1

1N5812 — 1N5816

Figure 1
Typical Forward Characteristics

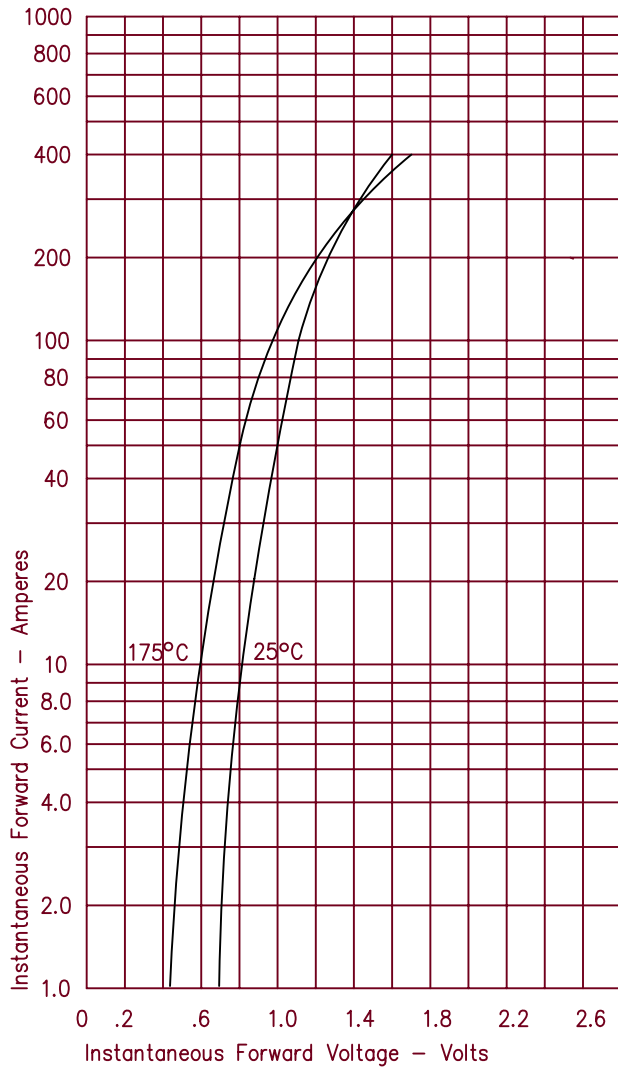


Figure 3
Typical Junction Capacitance

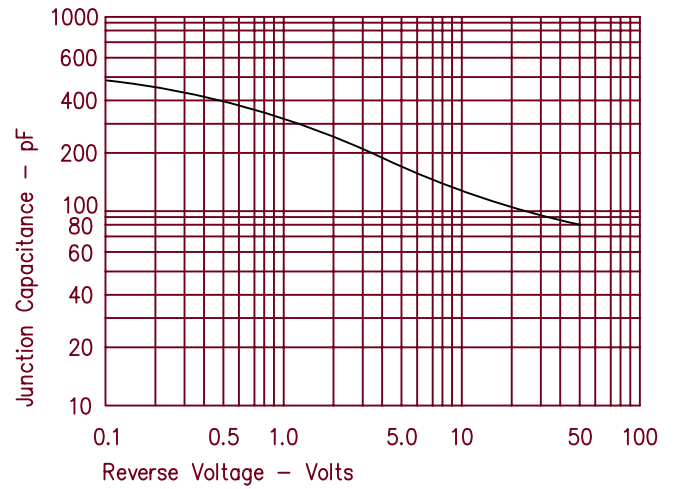


Figure 4
Forward Current Derating

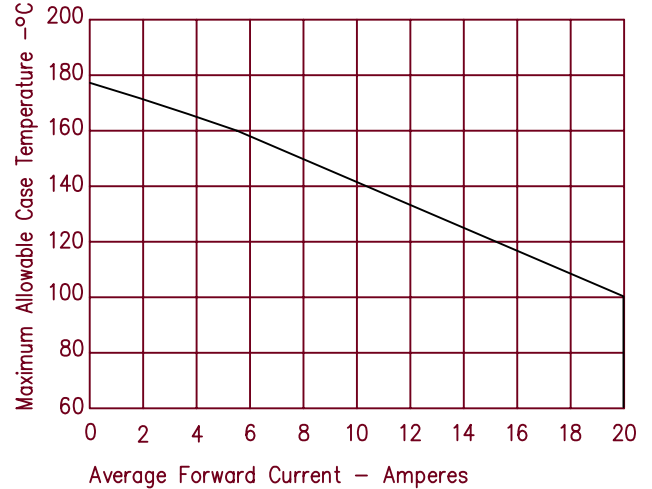


Figure 2
Typical Reverse Characteristics

