



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



## FAST RECOVERY POWER RECTIFIER

Qualified per MIL-PRF-19500/478

### Devices

1N5812	1N5814	1N5815	1N5816
1N5812R	1N5814R	1N5815R	1N5816R

### Qualified Level

JAN  
JANTX  
JANTXV

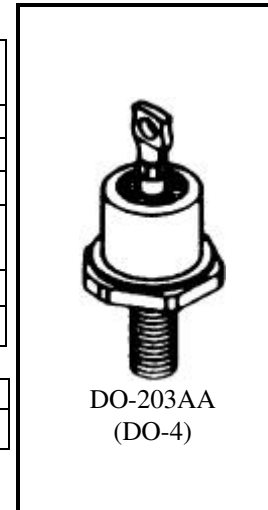
### MAXIMUM RATINGS

Ratings	Symbol	1N5812 1N5812R	1N5814 1N5814R	1N5816 1N5816R	Unit
Reverse Voltage	$V_R$	50	100	150	Vdc
Working Peak Reverse Voltage	$V_{RWM}$	50	100	150	Vpk
Average Forward Current $T_C = +100^{\circ}\text{C}$ <sup>(1)</sup>	$I_O$	20			Adc
Forward Current Surge Peak $T_C = +100^{\circ}\text{C}$ $t_p = 8.3$ ms	$I_{FSM}$	400			Adc
Reverse Recovery Time	$t_{rr}$	35			$\eta\text{s}$
Operating & Storage Junction Temperature	$T_J, T_{stg}$	-65 to +175			$^{\circ}\text{C}$

### THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1.5	$^{\circ}\text{C}/\text{W}$

1) Derate linearly 250 mA/ $^{\circ}\text{C}$  from +100 $^{\circ}\text{C}$  to +150 $^{\circ}\text{C}$ , & 300 mA/ $^{\circ}\text{C}$  above +150 $^{\circ}\text{C}$



\*See appendix A for package outline

### ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
Thermal Impedance $I_H \geq \text{rated } I_O; t_H \leq 250\text{ms}; 10\text{ mA} \leq I_M \leq 100\text{ mA}; t_{MD} = 250\ \mu\text{s (max)}$	$Z_{\theta JX}$		1.35	$^{\circ}\text{C}/\text{W}$
Forward Voltage $t_p \leq 8.3$ ms, duty cycle $\leq 2.0\%$ pulsed $I_F = 10$ A (pk) $I_F = 20$ A (pk)	$V_{F1}$ $V_{F2}$		0.860 0.950	Vdc Vpk
Reverse Current $V_R = \text{Rated } V_R$ (See 1.3 of MIL-PRF-19500/478)	$I_R$		10	$\mu\text{Adc}$
Breakdown Voltage $I_R = 100\ \mu\text{Adc}$ $I_R = 100\ \mu\text{Adc}$ $I_R = 100\ \mu\text{Adc}$	$V_{(BR)}$	60 110 160		Vdc
Junction Capacitance $V_R = 10$ Vdc, $V_{SIG} = 50$ mVdc (p-p) max, $f = 1.0$ MHz	$C_J$		300	pF
Forward Recovery Voltage $t_p \geq 20\ \eta\text{s}$ , $t_r = 8.0\ \eta\text{s}$ ; $I_F = 1,000$ mA	$V_{FR}$		2.2	V(pk)
Forward Recovery Time $I_F = 1,000$ mA	$t_{rr}$		15	$\eta\text{s}$