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!

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Microsemi LAWRENCE

TECHNICAL DATA

FAST RECOVERY POWER RECTIFIER

Qualified per MIL-PRF-19500/478

Devices				***Qualified Level***
1N5812	**1N5814**	**1N5815**	**1N5816**	**JAN**
1N5812R	**1N5814R**	**1N5815R**	**1N5816R**	**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 $T_C = +100^0C$ (1)	I_O	20			Adc
Forward Current Surge Peak $T_C = +100^0C$ $t_p = 8.3$ ms	I_{FSM}	400			Adc
Reverse Recovery Time	t_{rr}	35			ηs
Operating & Storage Junction Temperature	T_J, T_{stg}	-65 to +175			^0C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1.5	$^0C/W$

1) Derate linearly 250 mA/^{0}C from +100^{0}C to +150^{0}C, & 300 mA/^{0}C above +150^{0}C

DO-203AA
(DO-4)

*See appendix A for package outline

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
Thermal Impedance $I_H \geq$ rated I_O; $t_H \leq 250$ms; 10 mA $\leq I_M \leq$ 100 mA; $t_{MD} = 250$ µs (max)	$Z_{\theta JX}$		1.35	$^0C/W$
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 = Rated V_R (See 1.3 of MIL-PRF-19500/478)	I_R		10	µAdc
Breakdown Voltage $I_R = 100$ µAdc 1N5812, R $I_R = 100$ µAdc 1N5814, R $I_R = 100$ µAdc 1N5816, R	$V_{(BR)}$	 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 $t_p \geq 20$ ηs, $t_r = 8.0$ ηs; $I_F = 1{,}000$ mA	V_{FR}		2.2	V(pk)
Forward Recovery Time $I_F = 1{,}000$ mA	t_{rr}		15	ηs