



# TECHNICAL DATA

## FAST RECOVERY POWER RECTIFIER

Qualified per MIL-PRF-19500/478

### Devices

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

### Qualified Level

JAN  
JANTX  
JANTXV

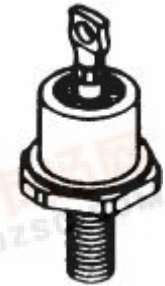
### MAXIMUM RATINGS

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 $T_C = +100^{\circ}C$ (1)	$I_O$	20			Adc
Forward Current Surge Peak $T_C = +100^{\circ}C$ $t_p = 8.3$ ms	$I_{FSM}$	400			Adc
Reverse Recovery Time	$t_{rr}$	35			ns
Operating & Storage Junction Temperature	$T_J, T_{stg}$	-65 to +175			$^{\circ}C$

### THERMAL CHARACTERISTICS

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

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



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; $t_{MD} = 250$ $\mu$ s (max)	$Z_{\theta JX}$		1.35	$^{\circ}C/W$
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	$\mu$ Adc
Breakdown Voltage $I_R = 100$ $\mu$ Adc $I_R = 100$ $\mu$ Adc $I_R = 100$ $\mu$ 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 $t_p \geq 20$ ns, $t_r = 8.0$ ns; $I_F = 1,000$ mA	$V_{FR}$		2.2	V(pk)
Forward Recovery Time $I_F = 1,000$ mA	$t_{rr}$		15	ns

