

HIGH RELIABILITY ULTRA FAST RECOVERY RECTIFIER

Qualified per MIL-PRF-19500/478

- 175°C Junction Temperature
- VRRM 50 to 150 Volts
- 20 Amps Current Rating

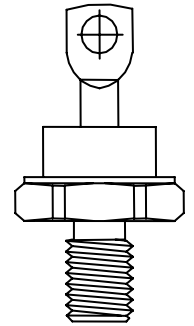
DEVICES

1N5812	1N5812R
1N5814	1N5814R
1N5816	1N5816R

LEVELS
JAN
JANTX
JANTXV
JANS

ABSOLUTE MAXIMUM RATINGS (T_C = +25°C unless otherwise noted)

Parameters / Test Conditions	Symbol	Value	Unit
Peak Repetitive Reverse Voltage 1N5812 / R 1N5814 / R 1N5816 / R	V _{RWM}	50 100 150	V
Peak Working Reverse Voltage 1N5812 / R 1N5814 / R 1N5816 / R	V _{RRM}	50 100 150	V
Average Forward Current, T _C = 100°	I _F	20	A
Peak Surge Forward Current @ t _p = 8.3ms, half sinewave, T _C = 100°C	I _{FSM}	400	A
Thermal Resistance, Junction to Case	R _{θJC}	1.5	°C/W
Operating Junction Temperature Range	T _J	-65°C to 175°C	°C
Storage Temperature Range	T _{stg}	-65°C to 175°C	°C



DO-203AA (DO-4)

ELECTRICAL CHARACTERISTICS (T_A = +25°C, unless otherwise noted)

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Forward Voltage I _{FM} = 10A, T _C = 25°C*	V _{FM}		0.860	V
Forward Voltage I _{FM} = 20A, T _C = 25°C*	V _{FM}		0.950	V
Forward Voltage I _{FM} = 10A, T _C = 100°C*	V _{FM}		0.780	V
Reverse Current V _{RM} = 50V, T _C = 25°C V _{RM} = 100V, T _C = 25°C V _{RM} = 150V, T _C = 25°C	I _{RM}		10	μA
Reverse Current V _{RM} = 50V, T _C = 100°C V _{RM} = 100V, T _C = 100°C V _{RM} = 150V, T _C = 100°C	I _{RM}		1	mA
Reverse Recovery Time I _F = I _R = 1A	T _{rr}		35	ns
Capacitance Junction V _R = 10V, f = 1MHz, T _J = 25°C	C _J		300	pF

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

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GRAPHS

FIGURE 1

TYPICAL FORWARD CHARACTERISTICS

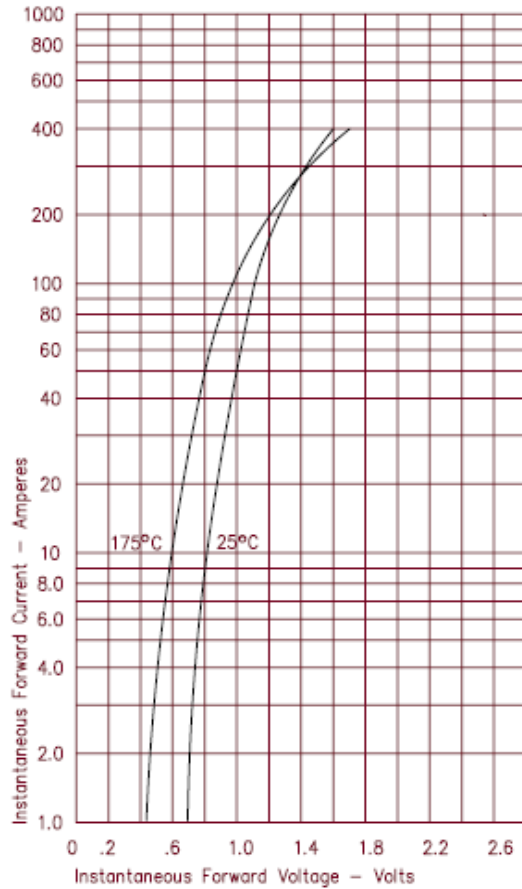


FIGURE 3

TYPICAL JUNCTION CAPACITANCE

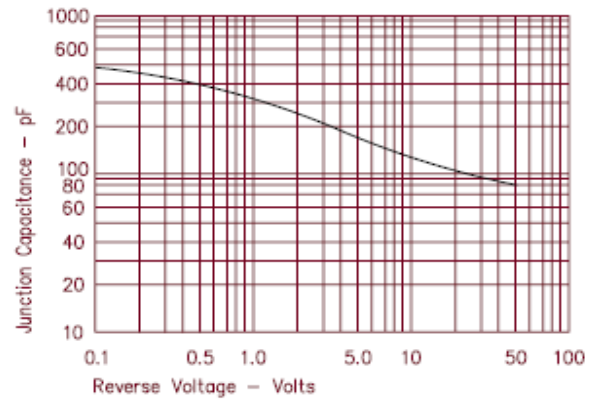


FIGURE 4

FORWARD CURRENT DERATING

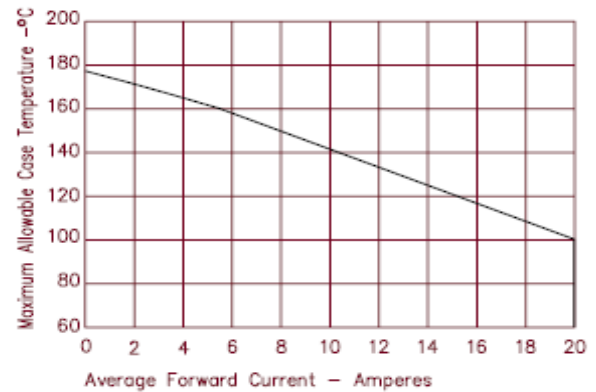


FIGURE 2

TYPICAL REVERSE CHARACTERISTICS

