

HIGH RELIABILITY FAST RECOVERY RECTIFIER

Qualified per MIL-PRF-19500/308

- 150°C Junction Temperature
- VRRM 50 to 400 Volts
- 50 Amps Current Rating

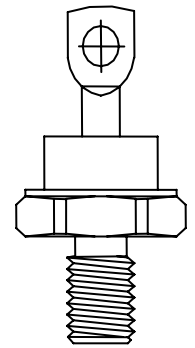
DEVICES

1N3909	1N3912	1N3910A	1N3913A	1N3911R	1N3909AR	1N3912AR
1N3910	1N3913	1N3911A	1N3909R	1N3912R	1N3910AR	1N3913AR
1N3911	1N3909A	1N3912A	1N3910R	1N3913R	1N3911AR	

LEVELS
 JAN
 JANTX
 JANTXV

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

Parameters / Test Conditions	Symbol	Value	Unit
Peak Reverse Voltage	V _{RWM}	50	V
		100	
		200	
		300	
		400	
Peak Working Reverse Voltage	V _{RRM}	50	V
		100	
		200	
		300	
		400	
Average Forward Current, T _C = 100°	I _F	50	A
Peak Surge Forward Current @ 8.3ms, half sinewave, T _C = 100°C	I _{FSM}	300	A
		400	
Thermal Resistance, Junction to Case	R _{θJC}	0.8	°C/W
Operating Case Temperature Range	T _j	-65°C to 150°C	°C
Storage Temperature Range	T _{STG}	-65°C to 175°C	°C



DO-203AB (DO-5)

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

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Forward Voltage I _{FM} = 50A, T _C = 25°C*	V _{FM}		1.4	V
Forward Voltage I _{FM} = 400A, T _C = 150°C**	V _{FM}		2.75	V
Reverse Current V _{RM} = 50V, T _C = 25°C	I _{RM}		15	μA
V _{RM} = 100V, T _C = 25°C				
V _{RM} = 200V, T _C = 25°C				
V _{RM} = 300V, T _C = 25°C				
V _{RM} = 400V, T _C = 25°C				
Reverse Current V _{RM} = 50V, T _C = 150°C	I _{RM}		6	mA
V _{RM} = 100V, T _C = 150°C				
V _{RM} = 200V, T _C = 150°C				
V _{RM} = 300V, T _C = 150°C				
V _{RM} = 400V, T _C = 150°C				
Reverse Recovery Time V _{RM} = 30V, I _F = 1A	T _{rr}		200	ns
			150	

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

** Pulse test: Pulse width 800 μsec

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GRAPHS

FIGURE 1

TYPICAL FORWARD CHARACTERISTICS

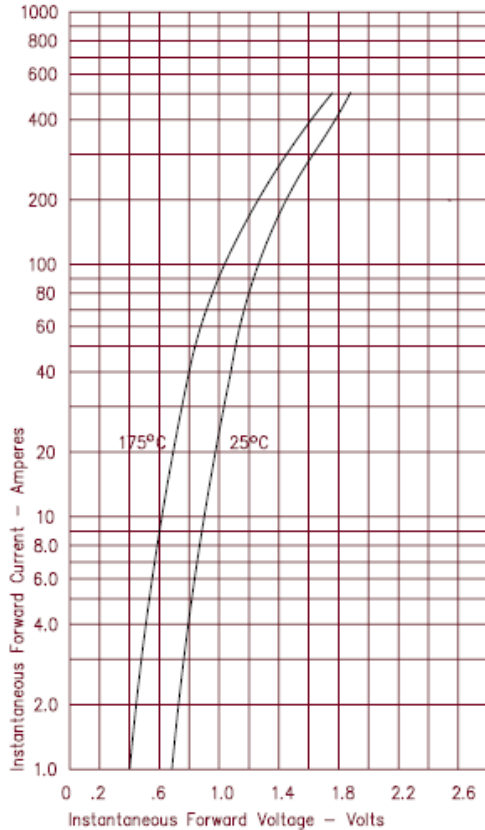


FIGURE 3

TYPICAL JUNCTION CAPACITANCE

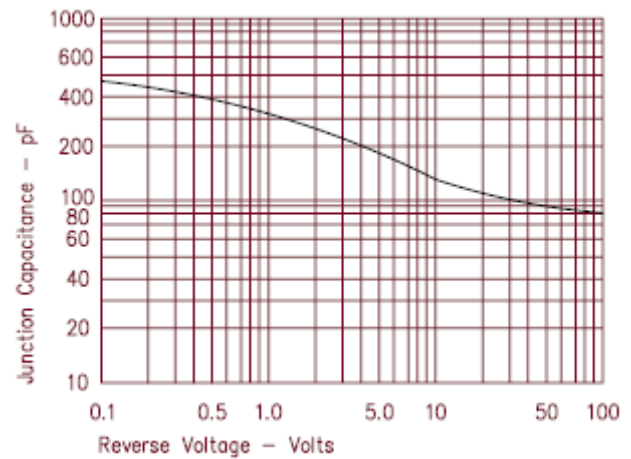


FIGURE 4

FORWARD CURRENT DERATING

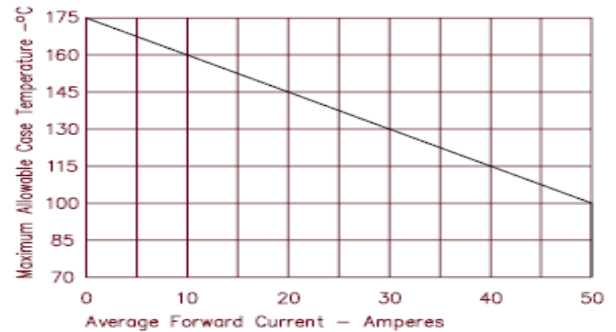


FIGURE 2

TYPICAL REVERSE CHARACTERISTICS

