

HIGH RELIABILITY FAST RECOVERY RECTIFIER

Qualified per MIL-PRF-19500/308

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

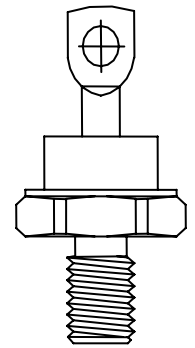
DEVICES

| | | | | | | |
|--------|---------|---------|---------|---------|----------|----------|
| 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

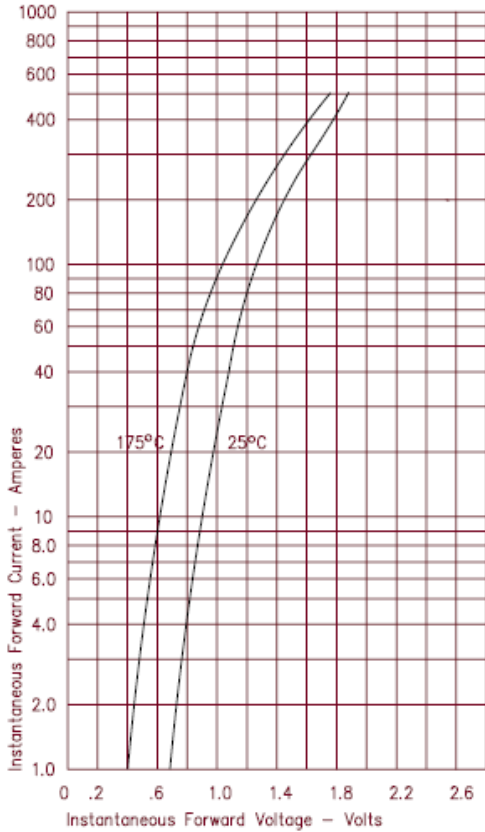


FIGURE 3

TYPICAL JUNCTION CAPACITANCE

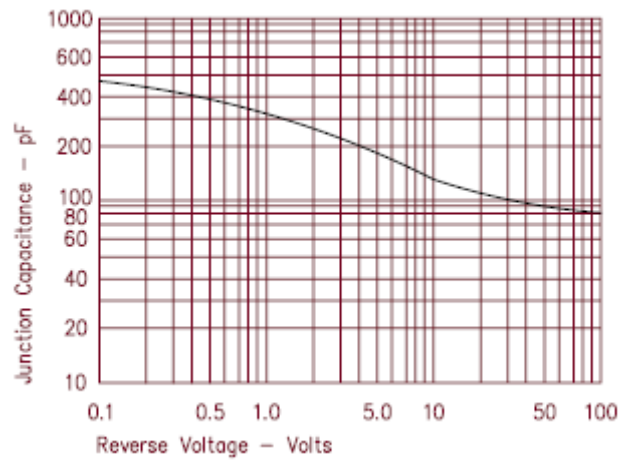


FIGURE 4

FORWARD CURRENT DERATING

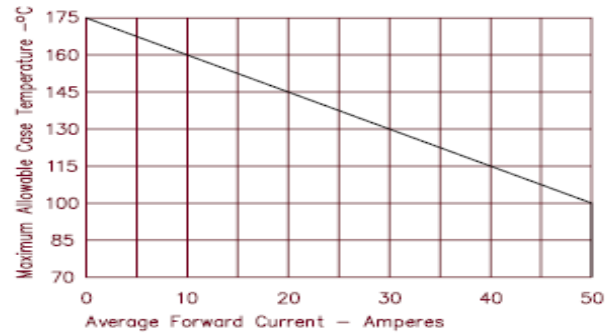


FIGURE 2

TYPICAL REVERSE CHARACTERISTICS

