

HIGH RELIABILITY ULTRA FAST RECOVERY RECTIFIER

Qualified per MIL-PRF-19500/550

- 800 Amps Surge Rating
- VRRM 50 to 150 Volts
- 70 Amps Current Rating

DEVICES

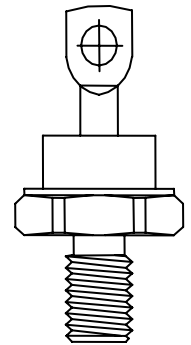
| | |
|---------------|----------------|
| 1N6304 | 1N6304R |
| 1N6305 | 1N6305R |
| 1N6306 | 1N6306R |

LEVELS

| |
|---------------|
| JAN |
| JANTX |
| JANTXV |

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

| Parameters / Test Conditions | Symbol | Value | Unit |
|---|------------------|----------------|------|
| Peak Repetitive Reverse Voltage | V _{RWM} | 50 | V |
| | | 100 | |
| | | 150 | |
| Peak Working Reverse Voltage | V _{RWM} | 50 | V |
| | | 100 | |
| | | 150 | |
| Average Forward Current, T _C = 100° | I _F | 70 | A |
| Peak Surge Forward Current @ t _p = 8.3ms, half sinewave, T _C = 55°C | I _{FSM} | 800 | A |
| Thermal Resistance, Junction to Case | R _{θJC} | 0.8 | °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-203AB (DO-5)

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

| Parameters / Test Conditions | Symbol | Min. | Max. | Unit | |
|--|-----------------|-----------------|-----------------|------|----|
| Forward Voltage I _{FM} = 70A, T _C = 25°C* | V _{FM} | | 0.975 | V | |
| Forward Voltage I _{FM} = 150A, T _C = 25°C* | V _{FM} | | 1.18 | V | |
| Forward Voltage I _{FM} = 70A, T _C = 150°C* | V _{FM} | | 0.84 | 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} | | 25 | μA | |
| Reverse Current V _{RM} = 50V, T _C = 150°C V _{RM} = 100V, T _C = 150°C V _{RM} = 150V, T _C = 150°C | | I _{RM} | | 30 | mA |
| Reverse Recovery Time I _F = 0.5A, I _R = 1A | | | T _{rr} | | 50 |
| Reverse Recovery Time I _F = 70A | T _{rr} | | | 60 | ns |
| Capacitance Junction V _R = 10V, f = 1MHz, T _J = 25°C | C _J | | 600 | pF | |

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

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GRAPHS

FIGURE 1
TYPICAL FORWARD CHARACTERISTICS

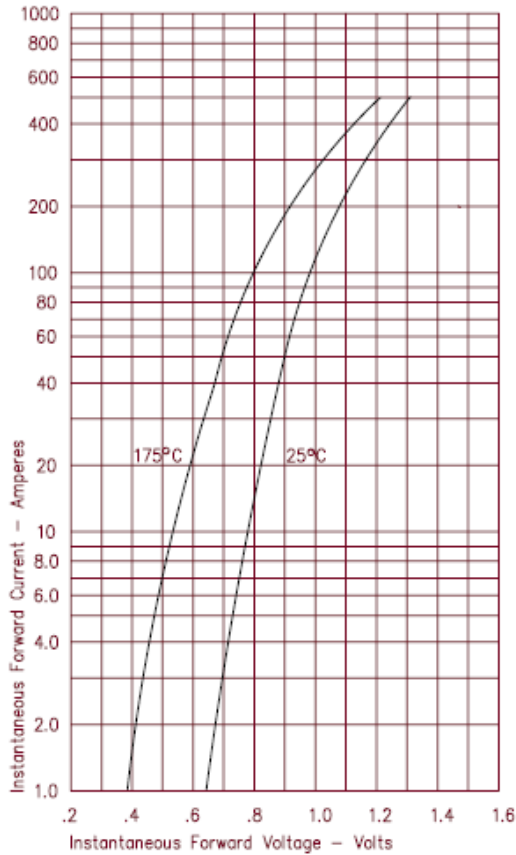


FIGURE 3
TYPICAL JUNCTION CAPACITANCE

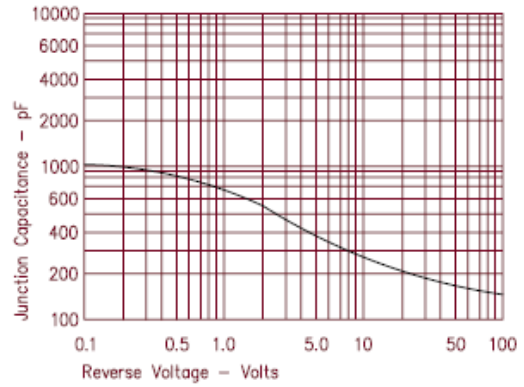


FIGURE 4
FORWARD CURRENT DERATING

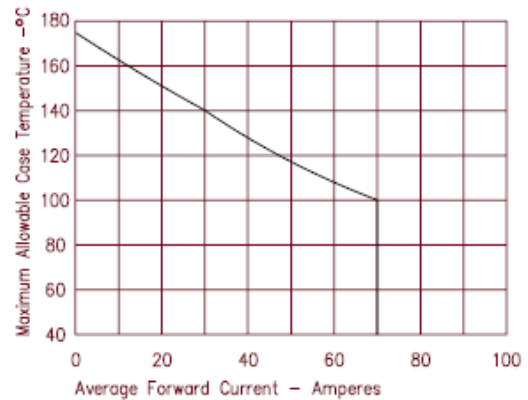


FIGURE 2
TYPICAL REVERSE CHARACTERISTICS

