

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

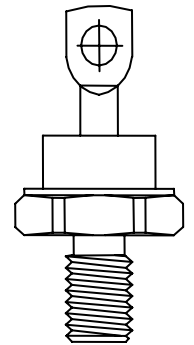
1N6304	1N6304R
1N6305	1N6305R
1N6306	1N6306R

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}	1N6304 / R 50	V
		1N6305 / R 100	
		1N6306 / R 150	
Peak Working Reverse Voltage	V _{RRM}	1N6304 / R 50	V
		1N6305 / R 100	
		1N6306 / R 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								
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

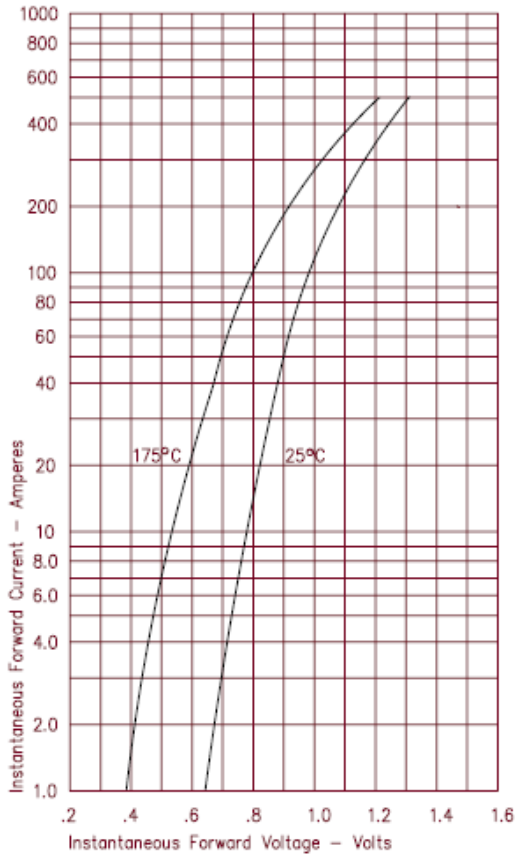


FIGURE 3
TYPICAL JUNCTION CAPACITANCE

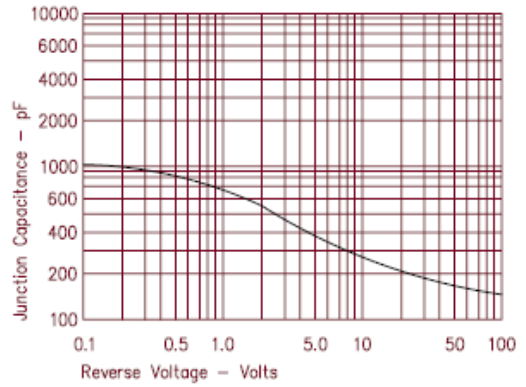


FIGURE 4
FORWARD CURRENT DERATING

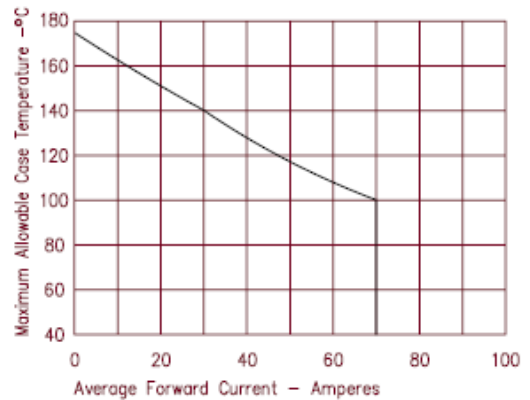


FIGURE 2
TYPICAL REVERSE CHARACTERISTICS

