GOODWORK

FR309

3.0 AMP FAST RECOVERY RECTIFIERS

FEATURES

* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 1.10 grams

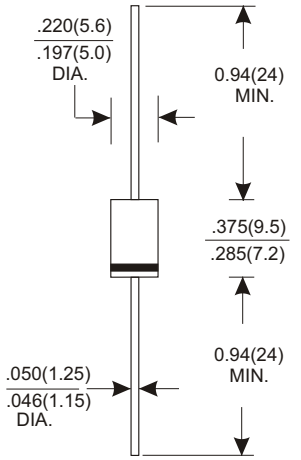
VOLTAGE RANGE

1300 Volts

CURRENT

3.0 Amperes

DO-27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25˚C ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	FR309	UNITS
Maximum Recurrent Peak Reverse Voltage	1300	V
Maximum RMS Voltage	910	V
Maximum DC Blocking Voltage	1300	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=75˚C	3.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	125	A
Maximum Instantaneous Forward Voltage at 3.0A	1.3	V
Maximum DC Reverse Current Ta=25˚C	5.0	μA
at Rated DC Blocking Voltage Ta=100˚C	150	μA
Maximum Reverse Recovery Time (Note 1)	500	nS
Typical Junction Capacitance (Note 2)	60	pF
Operating and Storage Temperature Range T_J, T_{STG}	-65 — +150	˚C

NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES FR309

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

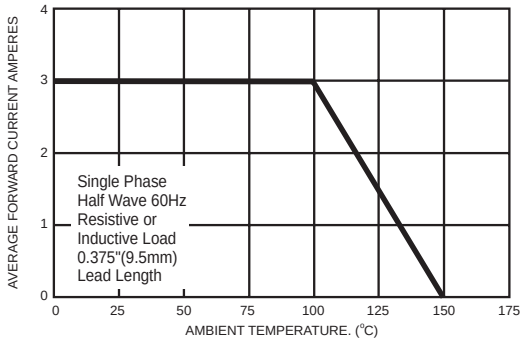


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

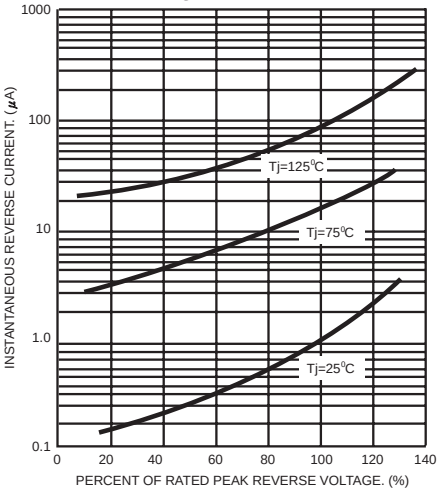


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

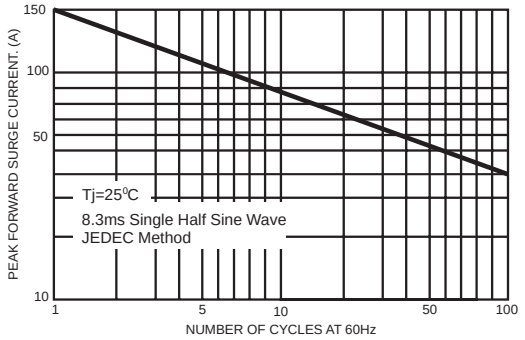


FIG.4- TYPICAL JUNCTION CAPACITANCE

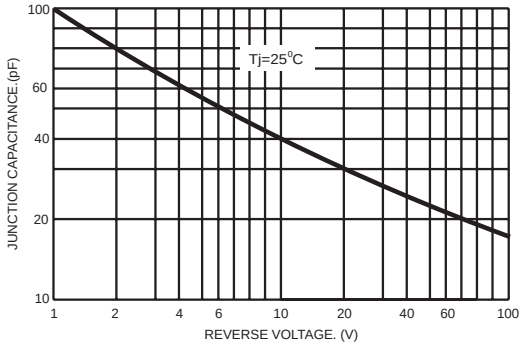


FIG.5- TYPICAL FORWARD CHARACTERISTICS

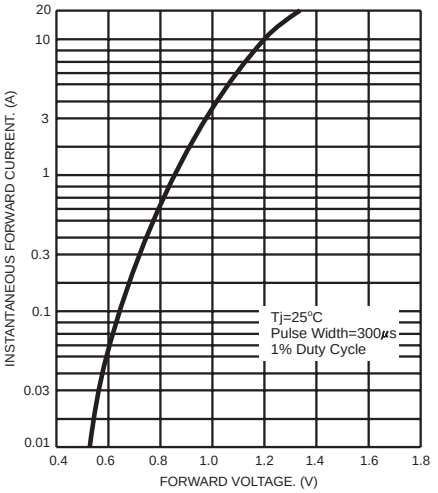
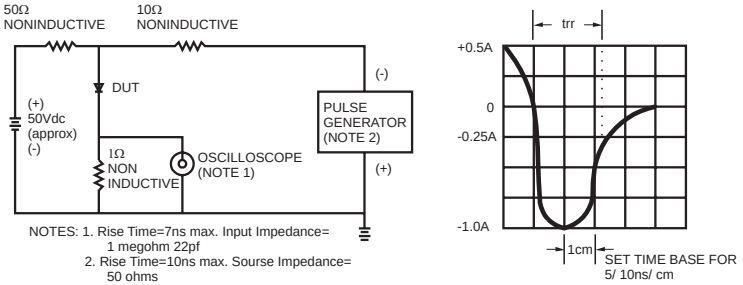


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance= 50 ohms