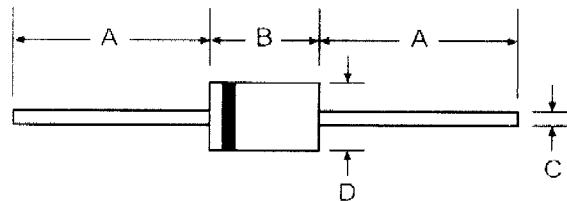


FR301 - FR307

3.0A FAST RECOVERY RECTIFIER

Features

- Low Reverse Recovery Time (T_{rr})
- Low Reverse Current
- Low Forward Voltage Drop
- High Current Capability
- Plastic Material - UL Recognition 94V-0



Mechanical Data

- Case: DO-201AD, Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-202 Method 208
- Polarity: Color Band Denotes Cathode
- Approx. Weight: 1.1 grams
- Mounting Position: Any

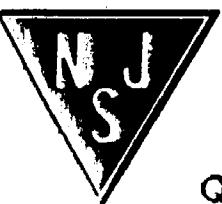
DO-201AD		
Dim	Min	Max
A	25.4	—
B	7.2	9.5
C	1.2	1.3
D	4.8	5.3
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics

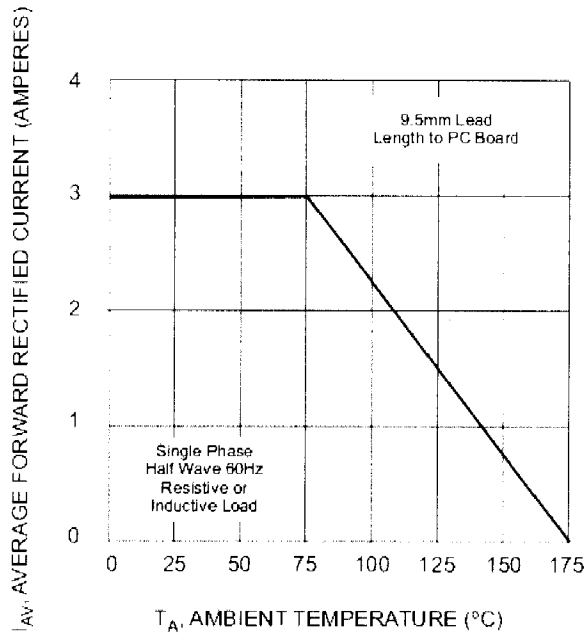
Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.

Characteristic	Symbol	FR 301	FR 302	FR 303	FR 304	FR 305	FR 306	FR 307	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current (9.5mm) Lead Length @ $T_A=75^\circ\text{C}$	I_{AV}	3.0							A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150							A
Maximum Instantaneous Forward Voltage at 3.0A DC	V_F	1.3							V
Maximum DC Reverse Current	I_R	10							μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150			250		500		ns
Typical Junction Capacitance (Note 2)	C_j	70			50				pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

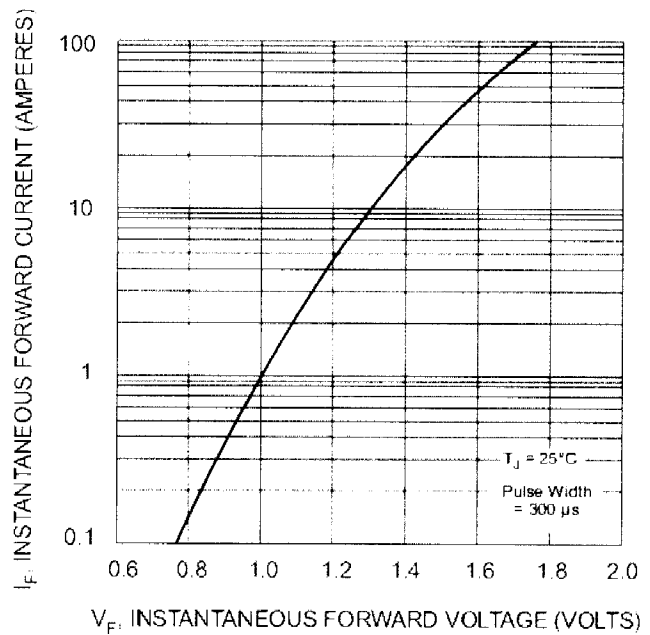
Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5\text{ A}$, $I_R=1.0\text{ A}$, $I_{RR}=0.25\text{ A}$
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.



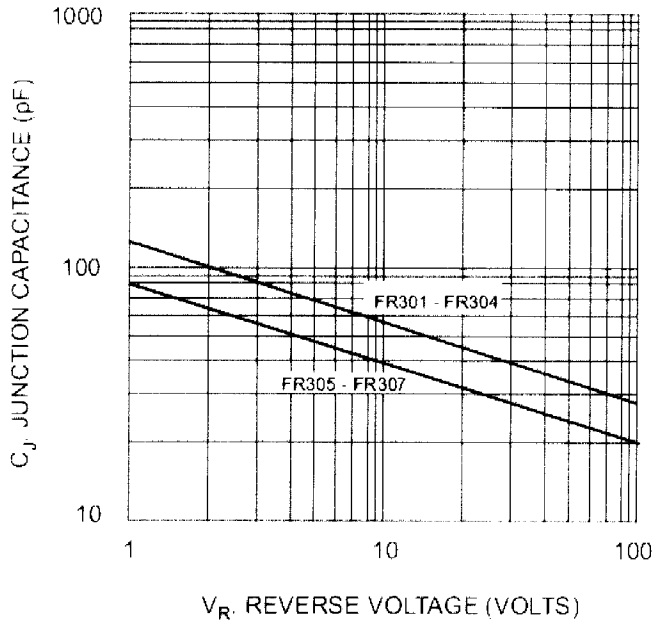
NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.



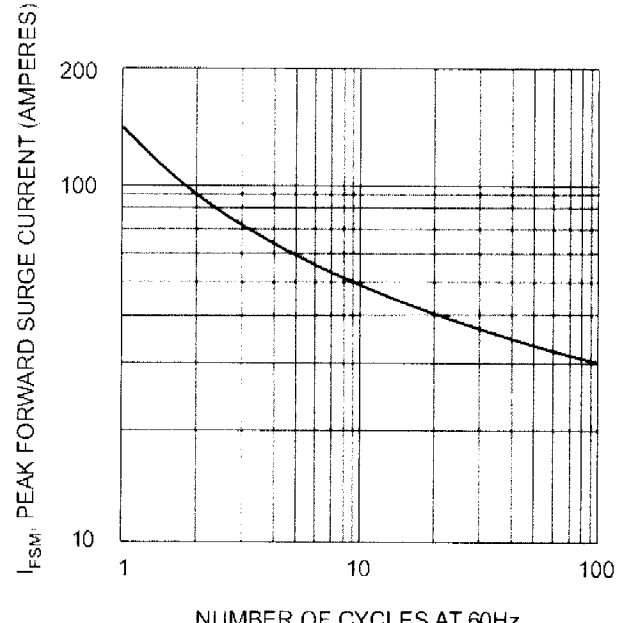
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1, Forward Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (VOLTS)
Fig. 2, Typical Forward Characteristics



V_R , REVERSE VOLTAGE (VOLTS)
Fig. 3, Typical Junction Capacitance



NUMBER OF CYCLES AT 60Hz
Fig. 4, Maximum Non-Repetitive Surge Current