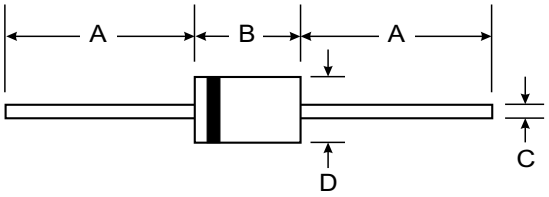
R1500F - R3000F

HIGH VOLTAGE RECTIFIER

Features

- High Voltage to 3000V with Low Leakage
- 1.5kV to 3kV V_{RRM}
- Surge Rating of 30A
- Plastic Package - UL Recognition Flammability Classification 94V-0



DO-41 Plastic		
Dim	**Min**	**Max**
A	25.40	—
B	4.06	5.21
C	0.71	0.884
D	2.00	2.72
All Dimensions in mm		

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Approx. Weight: 0.35 grams
- Mounting Position: Any
- Marking: Type Number

Maximum Ratings and Electrical Characteristics

@ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	R1500F	R2000F	R3000F	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	1500	2000	3000	V
RMS Reverse Voltage	$V_{R(RMS)}$	1050	1400	2100	V
Average Rectified Output Current (Note 1) @ T_L = 55°C	I_O	500		200	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30			A
Forward Voltage @ I_F = 500mA @ I_F = 200mA	V_{FM}	2.0 —	3.0 —	— 6.0	V
Peak Reverse Current at Rated DC Blocking Voltage	I_{RM}	5.0			μA
Typical Junction Capacitance (Note 2)	C_j	9.0		6.0	pF
Typical Reverse Recovery Time (Note 3)	t_{rr}	500			ns
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125			°C

Notes: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. Measured with I_F = 0.5A, I_R = -1A, I_{rr} = -0.25A

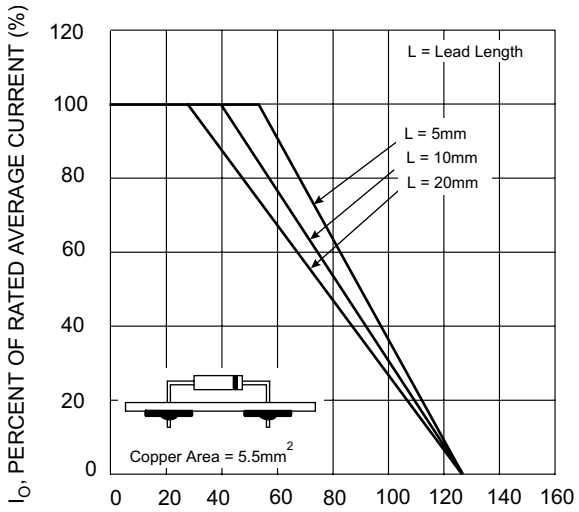


Fig. 1 Current Derating for Various Lead Lengths

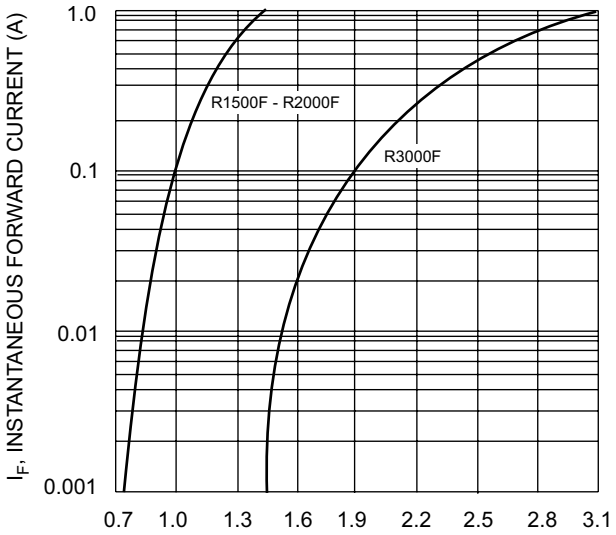


Fig. 2 Typical Forward Characteristics

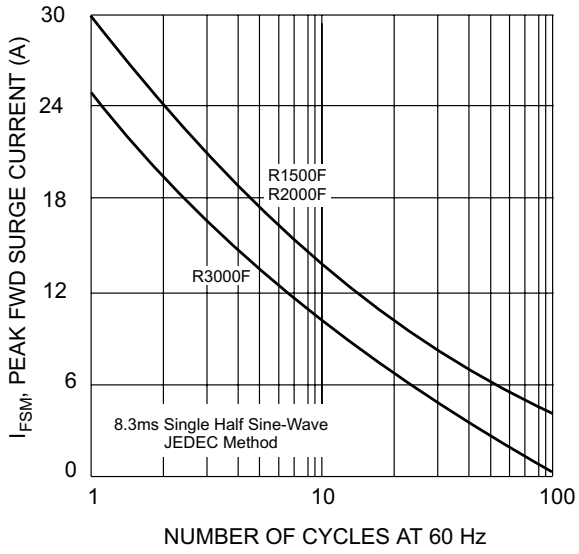


Fig. 3 Peak Fwd Surge Current vs # of Cycles @ 60 Hz

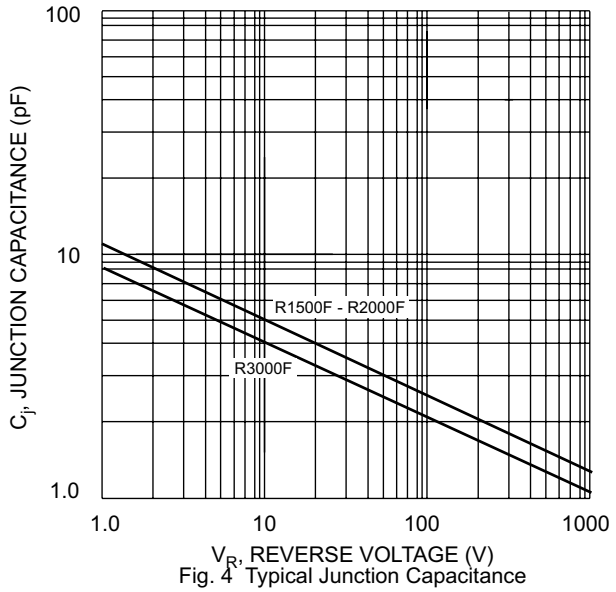


Fig. 4 Typical Junction Capacitance