

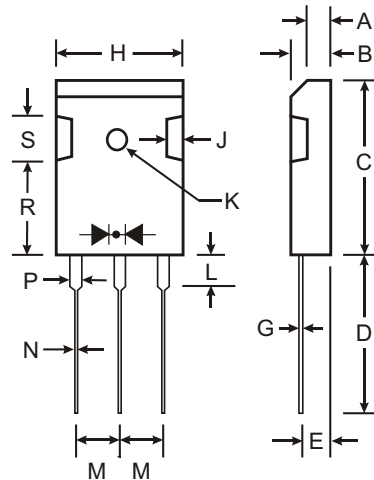
**DISCONTINUED**

**Features**

- Plastic Package - UL Flamability Classification 94V-0
- High Current Capability
- High Surge Capacity
- High Fast Switching Capability < 35 ns
- Low Switching Noise and High Reliability

**Mechanical Data**

- Case: TO-3P Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Mounting Position: Any
- Polarity: As marked
- Approx. Weight: 5.6 gram



Common Cathode (no Suffix) shown  
Add Suffix 'A' for Common Anode  
& change '+' to '-' in illustration above

TO-3P		
Dim	Min	Max
A	3.2	3.5
B	4.5	5.4
C	21.6	22.5
D	18.9	21.7
E	2.4	2.8
G	0.55	0.81
H	15.8	16.2
J	1.7	2.7
K	3.1 $\phi$	3.3 $\phi$
L	4.2	4.5
M	5.1	5.7
N	0.89	1.5
P	2.9	3.3
R	11.7	12.8
S	5.0	6.0

**Maximum Ratings and Electrical Characteristics**

Rating at 25 C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current 20%.

Characteristic	Symbol	SF301	SF302	SF303	SF304	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	V
Maximum RMS Voltage	$V_{RSM}$	35	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	V
Maximum Average Forward Rectified Current (Total Device) @ $T_C = 120$ C	$I_{(AV)}$	30				A
Peak forward Surge Current 8.3ms half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	300				A
Maximum Instantaneous Forward Voltage per leg at $I_F = 15A$ (Note 3) @ $T_J = 25$ C @ $T_J = 150$ C	$V_F$	0.975 0.880				V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage per leg (Note 3) @ $T_J = 25$ C @ $T_J = 150$ C	$I_R$	10 500				A
Typical Junction Capacitance (Note 1)	$C_J$	80				pF
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	35				ns
Typical Thermal Resistance, Junction to Case	$R_{JC}$	1.0				C/W
Storage and Operating Temperature Range	$T_J, T_{STG}$	-65 to +175				C

- Notes: (1) Measured at 1MHz and applied reverse voltage of 4.0 volts.  
(2) Reverse recovery test conditions:  $I_F = +0.5A$ ,  $I_R = 1.0A$ ,  $di/dt = 50A/s$ .  
(3) Pulse width = 300 S, 2% duty cycle.

DISCONTINUED

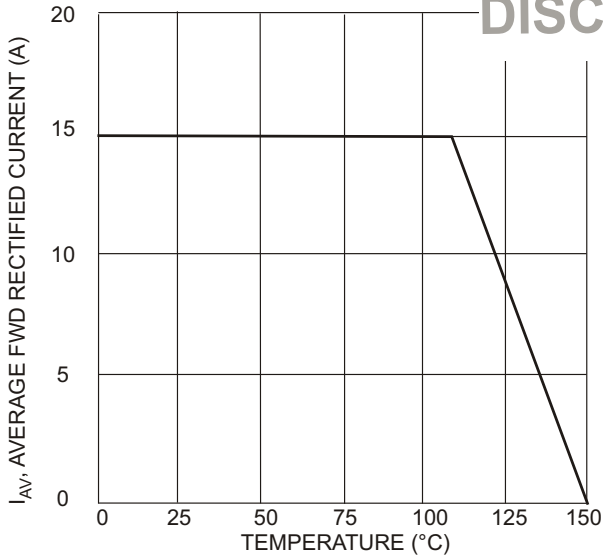


Fig. 1,  $T_C$ , Forward Current Derating Curve

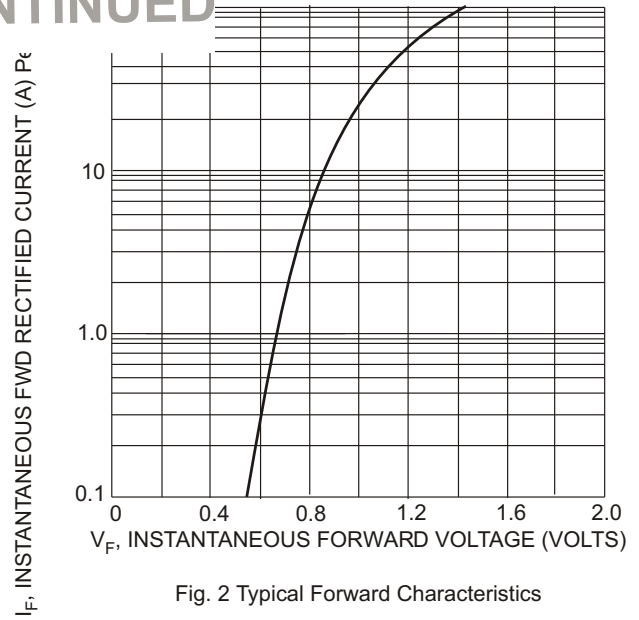


Fig. 2 Typical Forward Characteristics

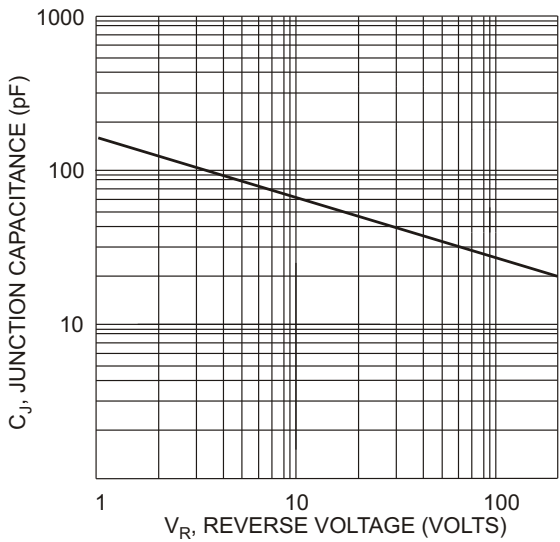


Fig. 3 Typical Junction Capacitance

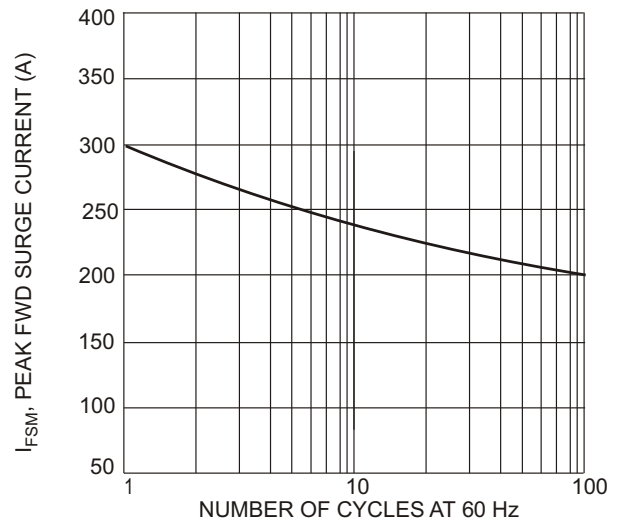


Fig. 4 Peak Forward Surge Current

# DISCONTINUED

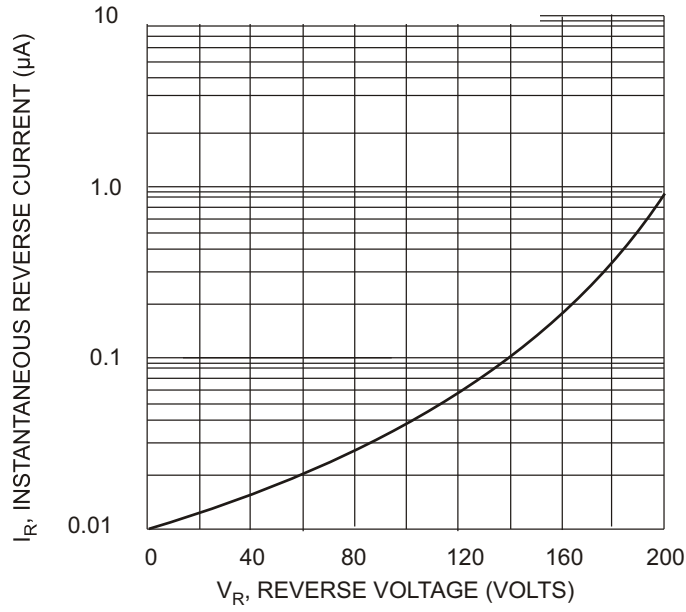
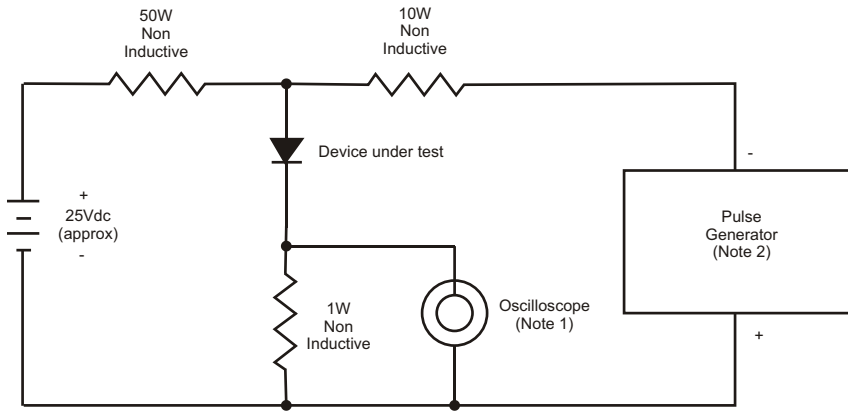


Fig. 5, Typical Reverse Characteristics



Notes: 1. Rise Time = 7ns max,  
 nce = 1MW 22pF  
 2. Rise Time = 10ns max  
 Source Impedance = 50W

