

VOLTAGE RANGE: 100 - 600V
CURRENT: 10 A

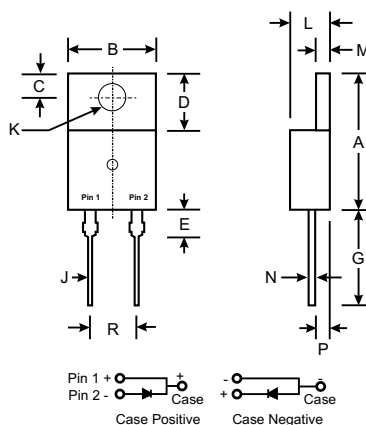


Features

- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Super-fast Switching Speed < 35ns
- Plastic Material - UL Flammability Classification 94V-0
- Good for 200KHz Power Supplier

Mechanical Data

- Case: TO-220A, Molded Plastic
- Terminals: Plated Axial Leads, Solderable per MIL-STD-202 Method 208
- Approx Weight: 2.24 grams
- Mounting Position: Any



TO-220A		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.25
G	12.70	14.73
H	2.29	2.79
J	0.51	1.14
K	3.53Ø	4.09Ø
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
R	4.83	5.33
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

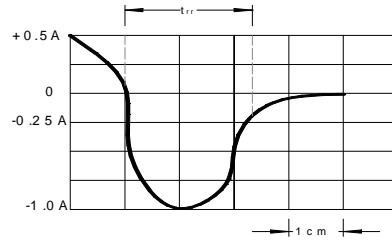
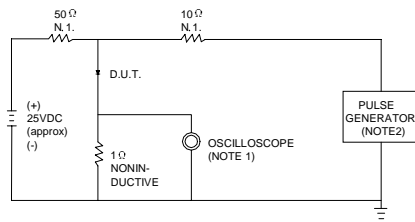
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	SF1010	SF1020	SF1030	SF1040	SF1050	SF1060	UNITS	
Maximum recurrent peak reverse voltage	V _{RRM}	100	200	300	400	500	600	V	
Maximum RMS voltage	V _{RMS}	70	140	210	280	350	420	V	
Maximum DC blocking voltage	V _{DC}	100	200	300	400	500	600	V	
Maximum average forward rectified current @T _C =100°C	I _{F(AV)}	10						A	
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	150						A	
Maximum instantaneous forward voltage @ 10A	V _F	0.98		1.3		1.7		V	
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R				10		400		μA
Maximum reverse recovery time (Note1)	t _{rr}				35			ns	
Typical junction capacitance (Note2)	C _J	70		50				pF	
Typical thermal resistance (Note3)	R _{θJA}	3.0						°C/W	
Operating junction temperature range	T _J	- 55 ----- + 150						°C	
Storage temperature range	T _{STG}	- 55 ----- + 150						°C	

NOTE: 1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Thermal resistance from junction to ambient.

Ratings AND Characteristic Curves SF1010-SF1060

FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω .

SET TIME BASE FOR 15 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

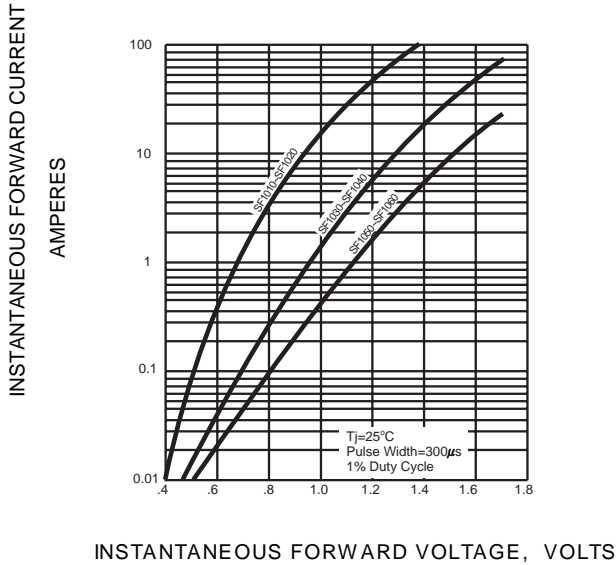


FIG.3 -- FORWARD DERATING CURVE

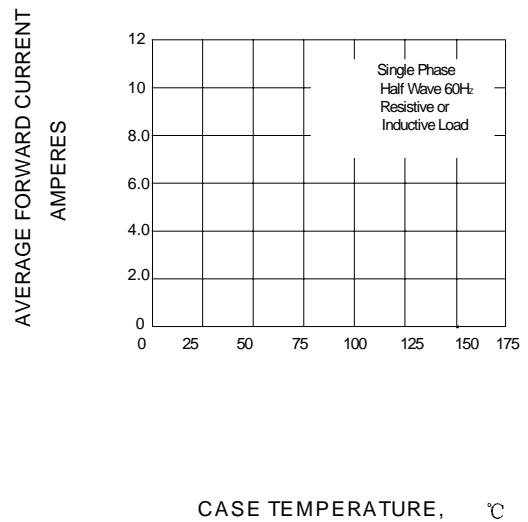


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

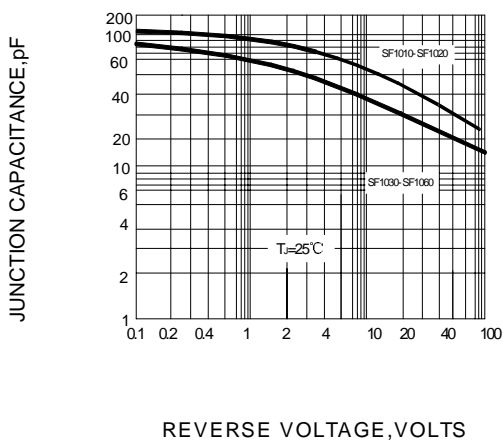


FIG.5 -- PEAK FORWARD SURGE CURRENT

