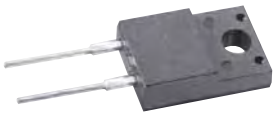
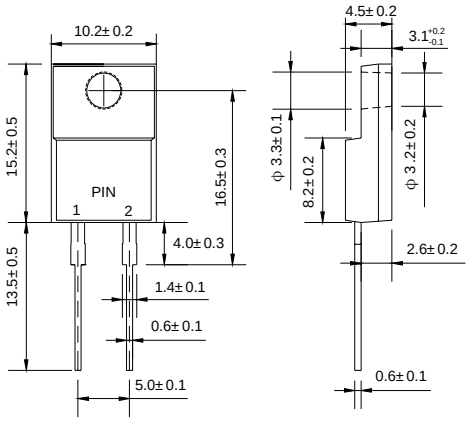
SF1010F-SF1060F

Super Fast Rectifiers

VOLTAGE RANGE: 50 --- 600 V
CURRENT: 10 A



ITO-220AC



Dimensions in millimeters

Features

- Low cost
- Diffusde junction
- Low forward voltage drop
- High current capability
- Easily cleaned with alcohol,Isopropanol and similar solvents
- The plastic material carries U/L recognition 94V-0

Mechanical Data

- Case:JEDEC ITO-220AC,molded plastic
- Polarity: As marked
- Weight:0.056 ounces,1.587 gram
- Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

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

		SF 1010F	SF 1020F	SF 1030F	SF 1040F	SF 1050F	SF 1060F	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℃	$I_{F(AV)}$	10						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T_J=125℃	I_{FSM}	150						A
Maximum instantaneous forward voltage @ 10A	V_F	0.98		1.3		1.7		V
Maximum reverse current @T_A=25℃ at rated DC blocking voltage @T_A=100℃	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)	$R_{\theta JA}$	3.0						℃/W
Operating junction temperature range	T_J	- 55 ----- + 150						℃
Storage temperature range	T_{STG}	- 55 ----- + 150						℃

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

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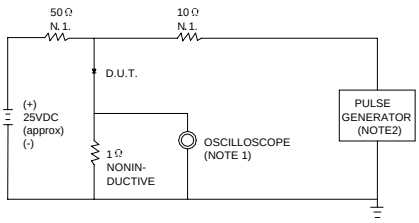
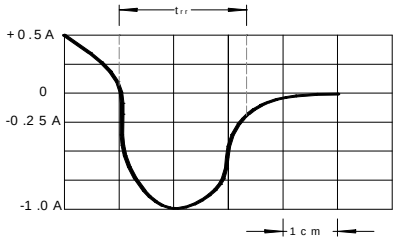
Ratings AND Charactieristic Curves

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

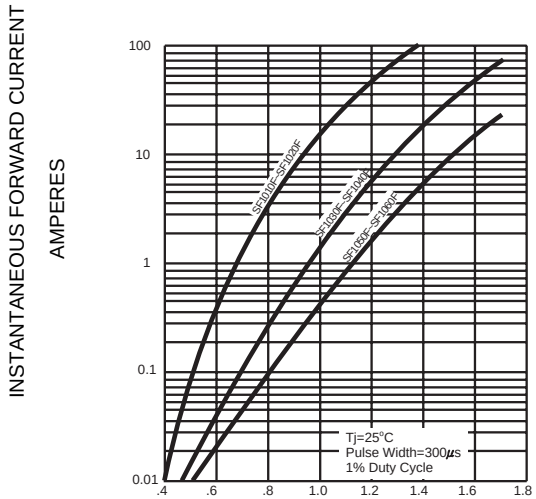




NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ.22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

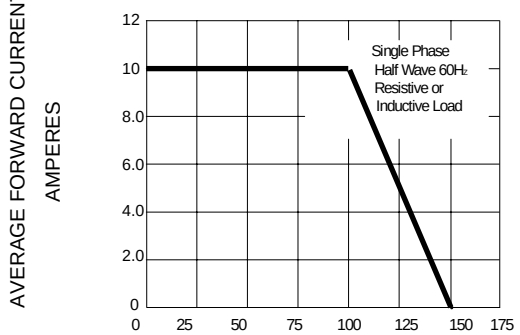
SET TIME BASE FOR 15 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC



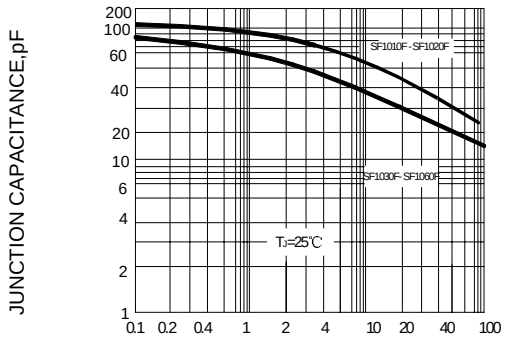
INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 -- FORWARD DERATING CURVE



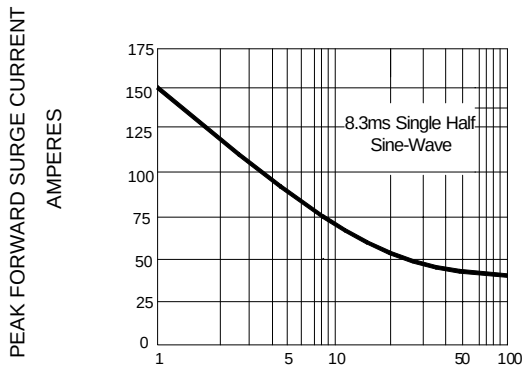
CASE TEMPERATURE, ℃

FIG.4 -- TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE,VOLTS

FIG.5 -- PEAK FORWARD SURGE CURRENT



NUMBER OF CYCLES AT 60Hz