DSK Diode Semiconductor Korea

SF2010C---SF2060C

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 100 --- 600 V
CURRENT: 20 A

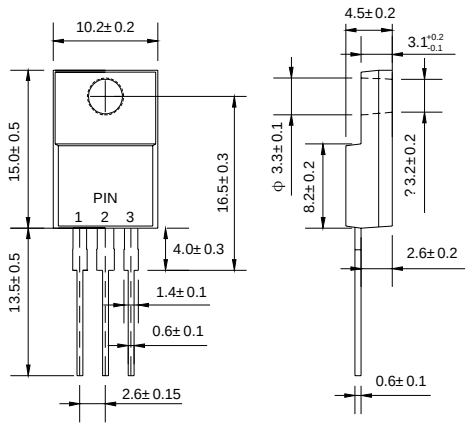
FEATURES

- ◇ Low cost
- ◇ Low leakage
- ◇ 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 TO-220AB,molded plastic
- ◇ Terminals: Solderable per MIL- STD-750,Method 2026
- ◇ Polarity: As marked
- ◇ Mounting position: Any

TO-220AB



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

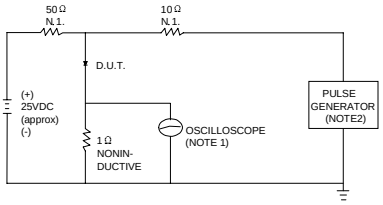
Ratings at 25℃ ambient temperature unless otherwise specified.

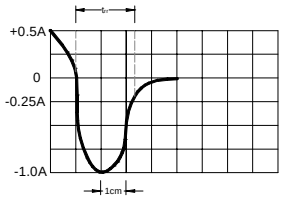
Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

		SF 2010C	SF 2020C	SF 2030C	SF 2040C	SF 2050C	SF 2060C	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 forw ard rectified current @T_C=100℃	$I_{F(AV)}$	20						A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load @T_J=125℃	I_{FSM}	150						A
Maximum instantaneous forw ard voltage @ 10 A	V_F	0.98		1.3		1.7		V
Maximum reverse current @T_A=25℃ at rated DC blocking voltage @T_A=150℃	I_R	5.0 250		10 500				μA
Maximum reverse recovery time (Note1)	t_{rr}	35						ns
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.

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

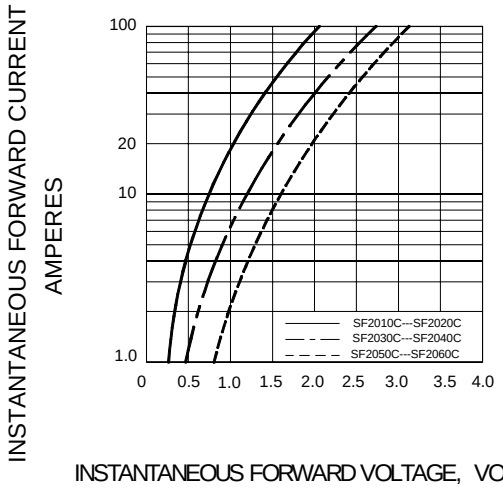


FIG.3 – PEAK FORWARD SURGE CURRENT

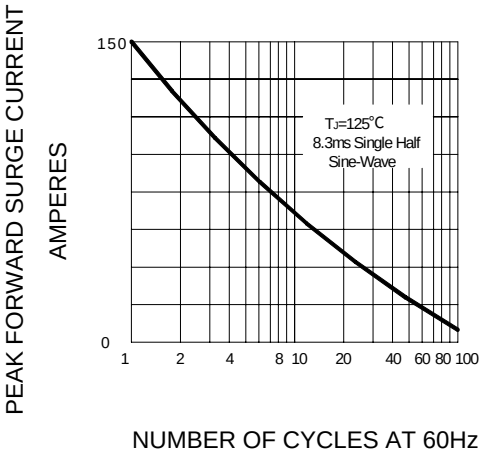


FIG.4-FORWORD DERATING CURVE

