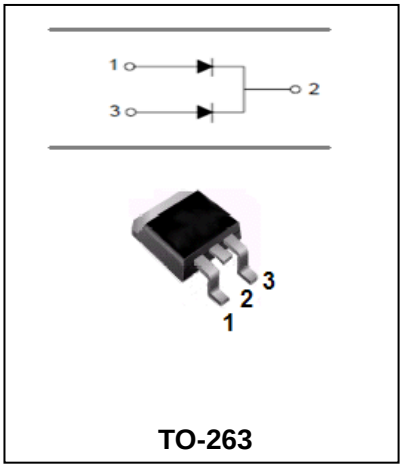
SUPER FAST RECTIFIER SF1020BC-SF1060BC

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.

Lead-free



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MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	SF 1020 BC	SF 1030 BC	SF 1040 BC	SF 1050 BC	SF 1060 BC	Units
V_{RRM}	Recurrent Peak Reverse Voltage	200	300	400	500	600	V
V_{RMS}	RMS Voltage	140	210	280	350	420	V
V_{DC}	DC Blocking Voltage	200	300	400	500	600	V
$I_{F(AV)}$	Average Forward Rectifide Current @T_A=100℃	10					A
I_{FSM}	Peak Forward Surge Current 8.3ms Single Half-Sine-wave Superimposed On Rated Load （Note1）	60					A
$R_{\theta JA}$	Typical Thermal Resistance （Note2）	3.0					℃/W
C_J	Typical Junction Capacitance （Note3）	70	50				pF
T_j T_{stg}	Operating junction and Storage temperature Range	-55 to +150					℃

Note: 1. The Value Just show Single Die.

2.Thermal Resistance From Junction to Ambient.

3.Measured at 1MHz and Applied Reverse Voltage of 4.0V DC.

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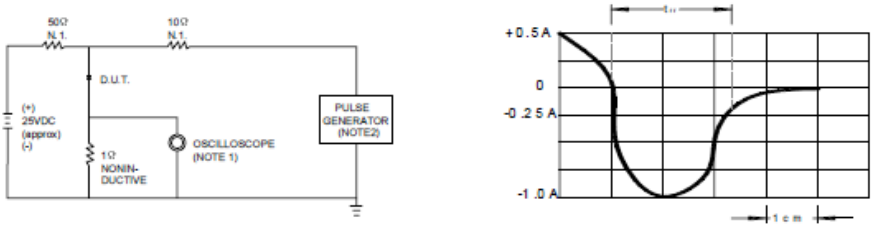
ELECTRICAL CHARACTERISTICS@ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MAX			UNIT
			SF1020BC	SF1030BC-SF1040BC	SF1050BC-SF1060BC	
Instantaneous Forward Voltage	V_F	I_F=5A	0.98	1.3	1.7	V
Reverse Current	I_R	$V_R=V_{RRM}, T_A$=25℃ $V_R=V_{RRM}, T_A$=100℃	5.0 250	10 400		μA
Reverse Recovery Time	t_{rr}	I_F=0.5A, I_R=1A, I_{rr}=0.25A	35			ns

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

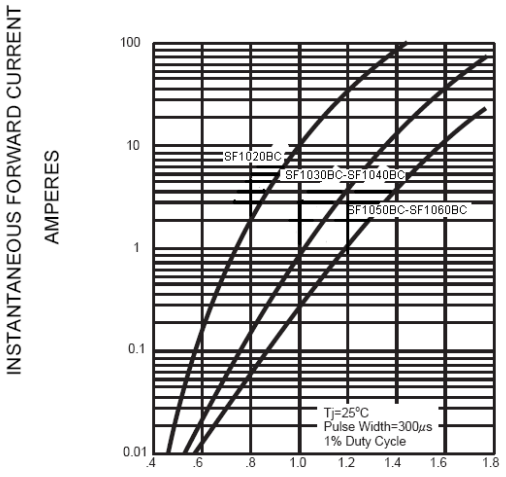
FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

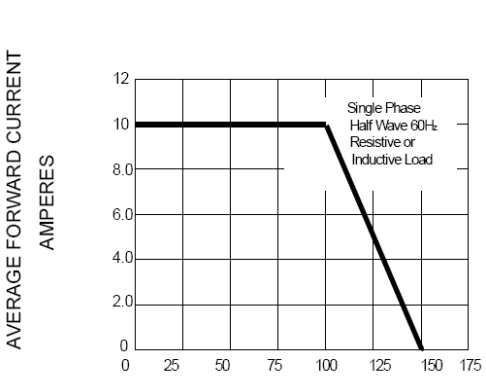
SET TIME BASE FOR 10 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 -- FORWARD DERATING CURVE



CASE TEMPERATURE, ℃

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FIG.4 -- TYPICAL JUNCTION CAPACITANCE

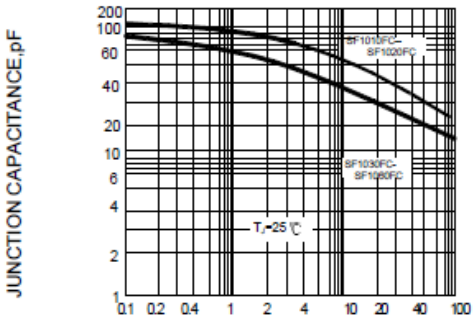
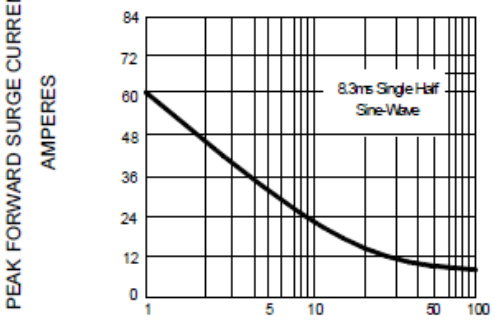
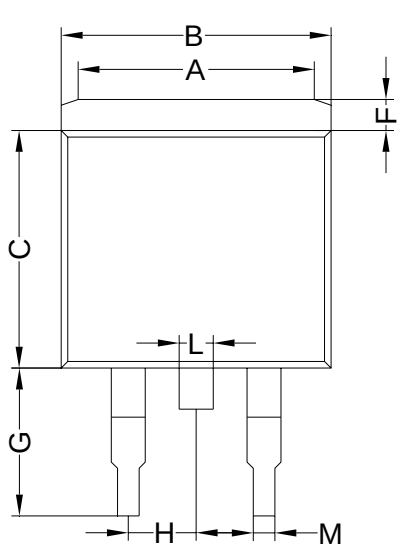


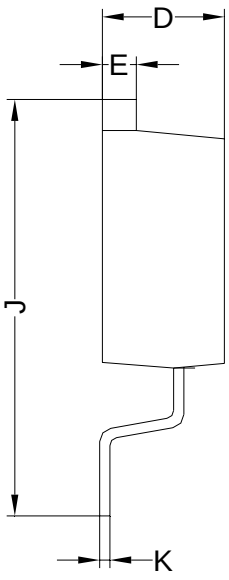
FIG.5 -- PEAK FORWARD SURGE CURRENT



PACKAGE OUTLINE

Plastic surface mounted package TO-263





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A	8.64	9.04
B	9.90	10.30
C	8.70	9.10
D	4.57 Typical	
E	1.27 Typical	
F	1.06	1.26
G	5.34	5.74
H	2.44	2.64
J	15.30	15.90
K	0.38 Typical	
L	1.17	1.37
M	0.71	0.91

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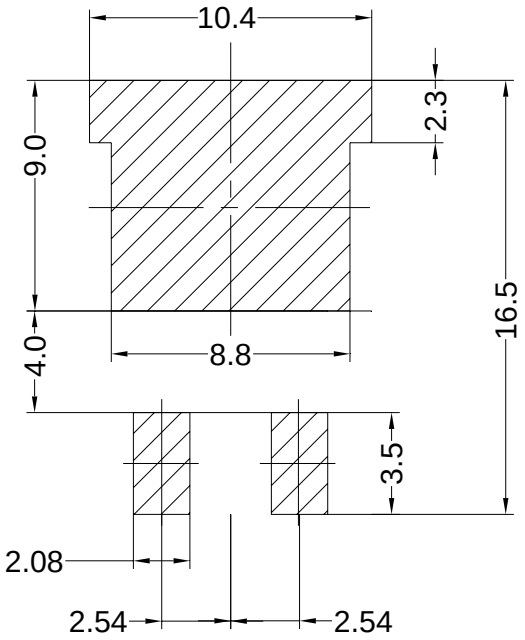
SOLDERING FOOTPRINT



Unit:mm