

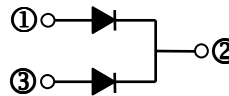
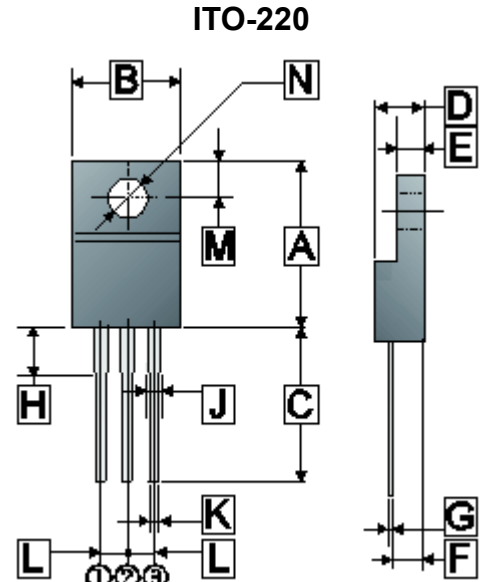
RoHS Compliant Product  
A suffix of "-C" specifies halogen free

### FEATURES

- Fast switching for high efficiency
- 150°C Operating Junction Temperature
- Low Power Loss, High Efficiency
- High-Switching Speed 25 Nanosecond Recovery Time
- Low Forward Voltage, High Current Capability
- Plastic Material Used Carries Underwriters Laboratory Flammability Classification 94V-0

### ORDER INFORMATION

Part Number	Type
SF10ED20F	Lead (Pb)-free
SF10ED20F-C	Lead (Pb)-free and Halogen-free



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.50	16.50	H	2.70	4.35
B	9.50	10.72	J	0.90	1.70
C	12.60	14.22	K	0.30	0.95
D	4.20	5.10	L	2.34	2.75
E	2.30	3.30	M	2.40	3.60
F	2.30	3.10	N	φ3.0	φ3.8
G	0.30	0.75			

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, de-rate current by 20%.)

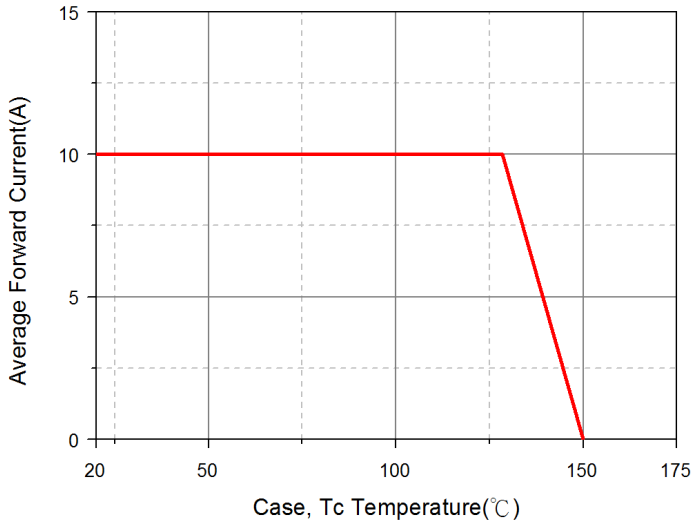
Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	200	V
Working Peak Reverse Voltage	$V_{RWM}$	200	V
DC Blocking Voltage	$V_R$	200	V
Average Rectifier Forward Current	Per Leg	5	A
	Per Device	10	
Non-Repetitive Peak Surge Current @ Surge applied at rate load conditions half-wave, single phase, 60Hz	$I_{FSM}$	60	A
Max. Instantaneous Forward Voltage @ $I_F=5A$	$T_A=25^\circ C$	0.98	V
	$T_A=125^\circ C$	0.88	
Max. Instantaneous Reverse Current <sup>2</sup>	$T_A=25^\circ C$	5	$\mu A$
	$T_A=125^\circ C$	50	
Reverse Recovery Time <sup>3</sup>	$T_{RR}$	25	nS
Typical Junction Capacitance <sup>1</sup>	$C_J$	45	pF
Thermal Resistance	$R_{\theta JC}$	4	°C / W
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	150, -55~150	°C

Notes:

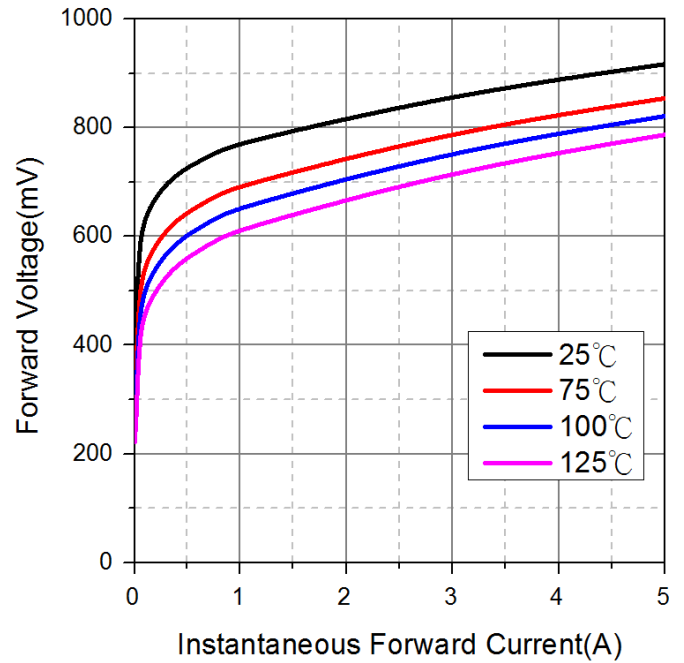
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse Test: Pulse Width=300 $\mu s$ , Duty Cycle  $\leq 2\%$ .
3.  $I_F=0.5A, I_R=1A, I_{RR}=0.25A$ .

**RATINGS AND CHARACTERISTIC CURVES**

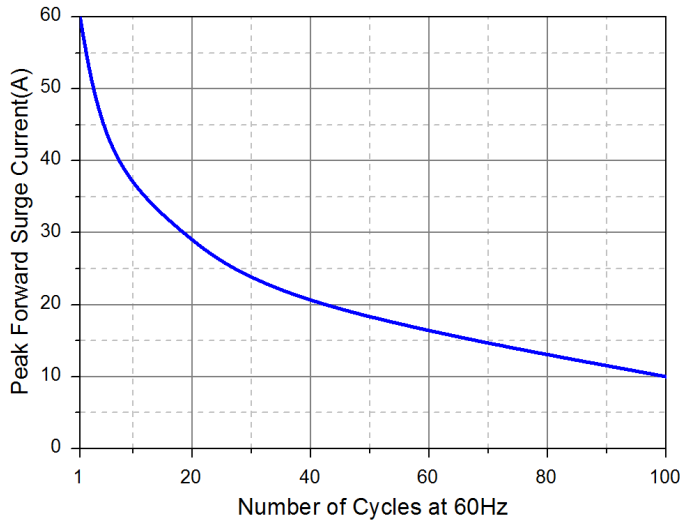
Typical Forward Current Derating Curve



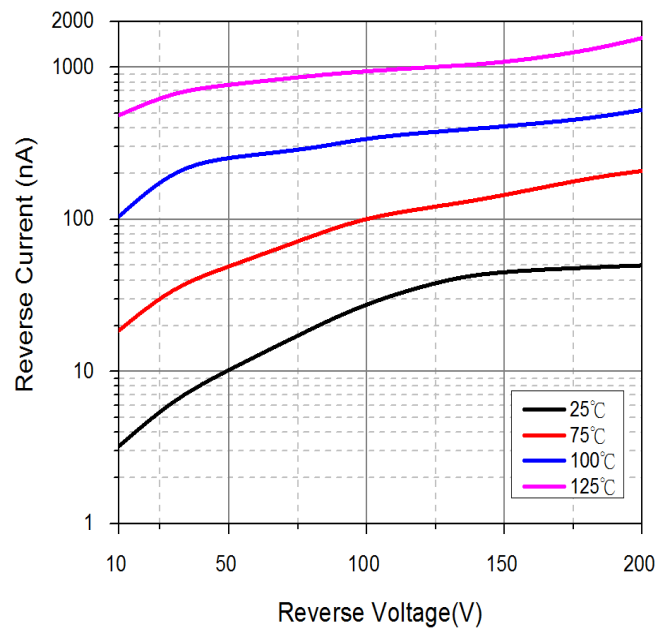
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

