

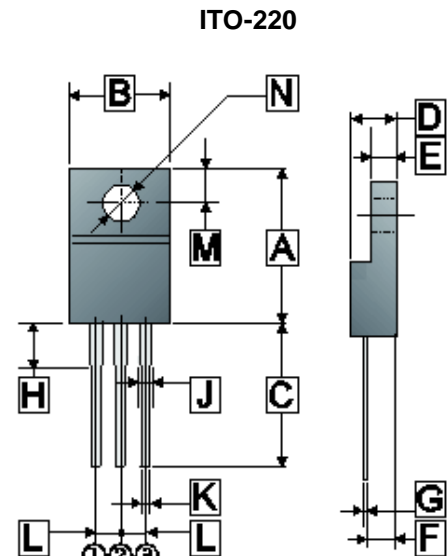
RoHS Compliant Product
A suffix of "-C" specifies halogen free

FEATURES

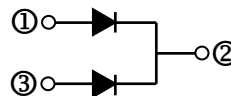
- Fast Switching For High Efficiency
- 175°C Operating Junction Temperature
- Low Power Loss, High Efficiency
- High-Switching Speed 25 Nanosecond Recovery Time
- Low Forward Voltage, High Current Capability
- Plastic Material Used Carries Underwriters Laboratory Flammability Classification 94V-0

ORDER INFORMATION

Part Number	Type
SF30ED30F	Lead (Pb)-free
SF30ED30F-C	Lead (Pb)-free and Halogen-free



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.40	16.50	H	3.10	4.50
B	9.50	10.72	J	0.80	1.80
C	12.58	14.22	K	0.30	0.95
D	3.90	5.10	L	1.80	2.95
E	2.10	3.56	M	2.15	3.60
F	2.10	3.20	N	φ 2.60	φ 3.80
G	0.30	0.80			



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%.)

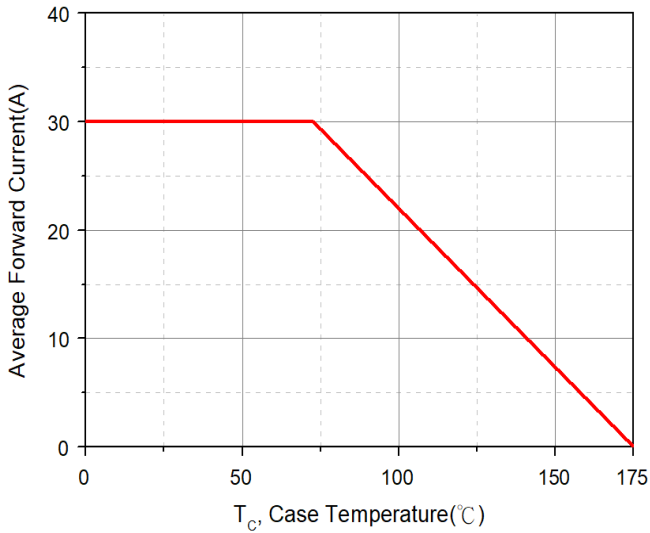
Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	300	V
Working Peak Reverse Voltage	V_{RWM}	300	V
DC Blocking Voltage	V_R	300	V
Average Rectifier Forward Current	Per Leg	15	A
	Per Device	30	
Non-Repetitive Peak Surge Current @ Surge applied at rate load conditions half-wave, single phase, 60Hz	I_{FSM}	150	A
Thermal Resistance from Junction-Case	$R_{\theta JC}$	4	°C/W
Operating Junction & Storage Temperature Range	T_J, T_{STG}	175, -55~150	°C

ELECTRICAL CHARACTERISTICS

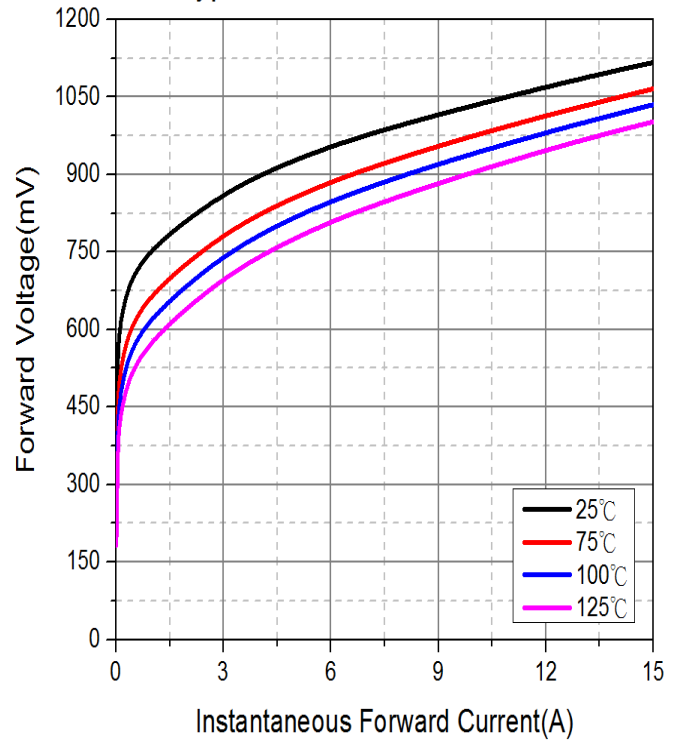
Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Maximum Instantaneous Forward Voltage	V_F	1	1.3	V	$I_F=10A, T_J=25^\circ C$
		1.1	1.55		$I_F=15A, T_J=25^\circ C$
		0.58	-		$I_F=1A, T_J=125^\circ C$
		0.9	-		$I_F=10A, T_J=125^\circ C$
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.2	5	uA	$T_J=25^\circ C$
		5	20		$T_J=125^\circ C$
Reverse Recovery Time	T_{RR}	17	25	nS	$I_F=0.5A, I_R=1A, I_{RR}=0.25A$
Typical Junction Capacitance	C_J	80	-	pF	$V_R=4V, f=1MHz$

RATINGS AND CHARACTERISTIC CURVES

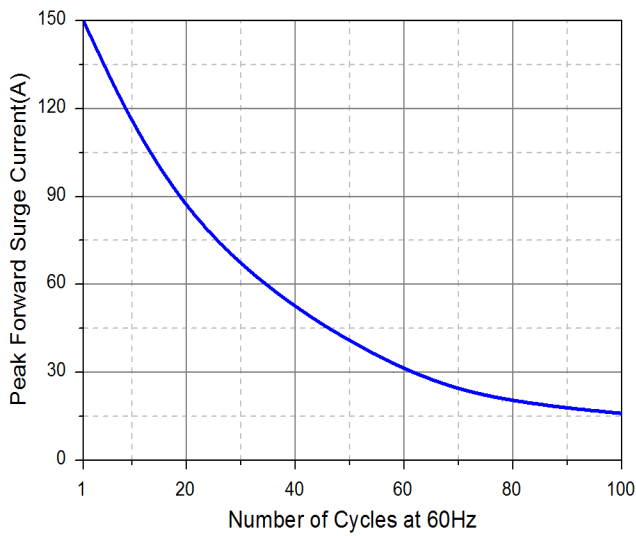
Typical Forward Current Derating Curve



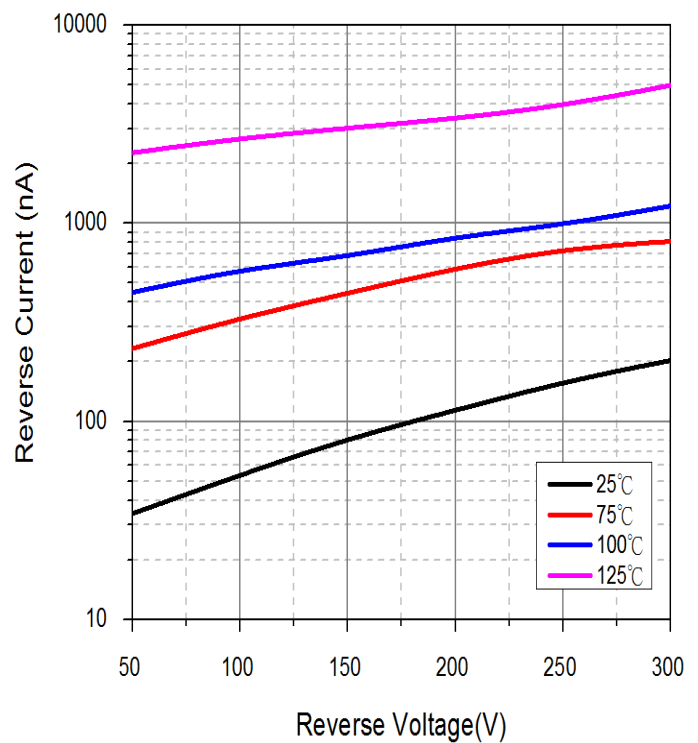
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

