

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

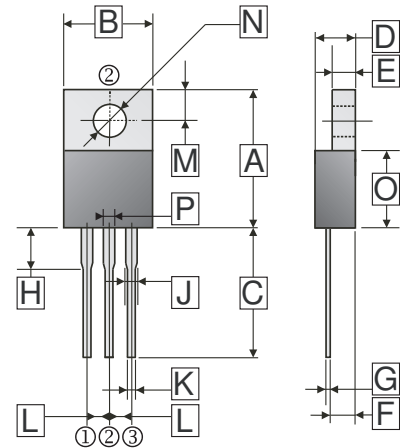
FEATURES

- Fast Switching for High Efficiency
- 150°C Operating Junction Temperature
- Low Power Loss, High Efficiency
- High-Switching Speed 30 Nanosecond Recovery Time
- Low Forward Voltage, High Current Capability
- Plastic Material Used Carries Underwriters Laboratory Flammability Classification 94V-0

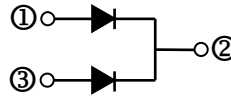
ORDER INFORMATION

Part Number	Type
SF10TD30	Lead (Pb)-free
SF10TD30-C	Lead (Pb)-free and Halogen-free

TO-220



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.22	16.51	J	0.70	1.78
B	9.57	10.90	K	0.38	1.11
C	12.50	14.75	L	2.01	3.07
D	3.56	5.10	M	2.22	3.43
E	0.51	1.47	N	3.10	4.31
F	2.03	3.19	O	8.10	9.65
G	0.279	0.76	P	1.18 Typ.	
H	2.95	4.5			



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%.)

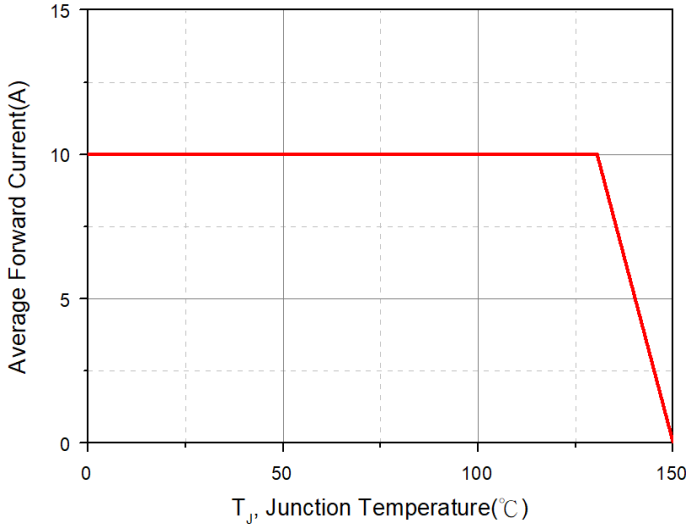
Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	300	V
Working Peak Reverse Voltage	V_{RWM}	300	V
DC Blocking Voltage	V_R	300	V
Average Rectifier Forward Current	Per Leg	5	A
	Per Device	10	
Non-Repetitive Peak Surge Current @ Surge applied at rate load conditions half-wave, single phase, 60Hz	I_{FSM}	80	A
Max. Instantaneous Forward Voltage @ $I_F=5A$	V_F	1.3	V
Max. Instantaneous Reverse Current ¹	$T_J=25^\circ C$	5	μA
	$T_J=125^\circ C$	50	
Reverse Recovery Time ²	T_{RR}	30	nS
Typical Junction Capacitance ³	C_J	44	pF
Thermal Resistance	$R_{\theta JC}$	2	$^\circ C / W$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	$^\circ C$

Notes:

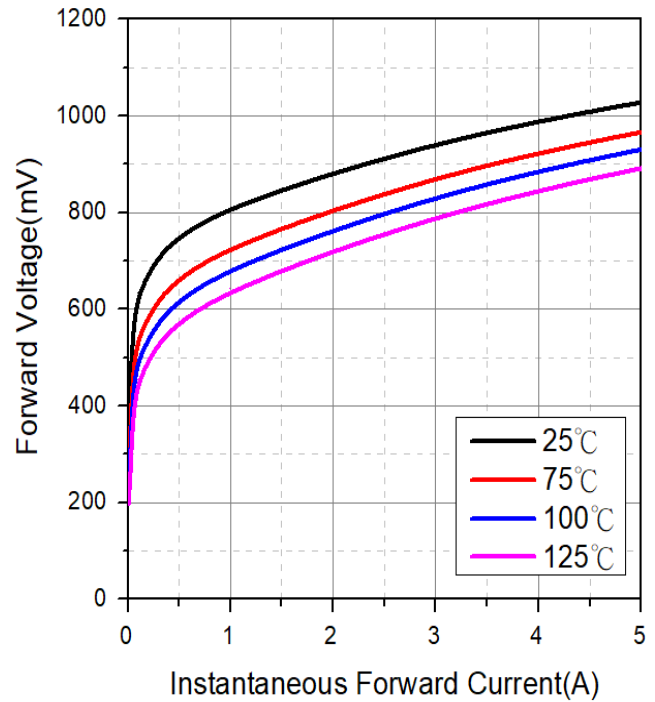
1. Pulse Test: Pulse Width=300 μs , Duty Cycle $\leq 2\%$.
2. $I_F=1A$, $V_R=30V$, $di_F/dt= -200A/us$
3. Measured at 1MHz and applied reverse voltage of 5V D.C.

RATINGS AND CHARACTERISTIC CURVES

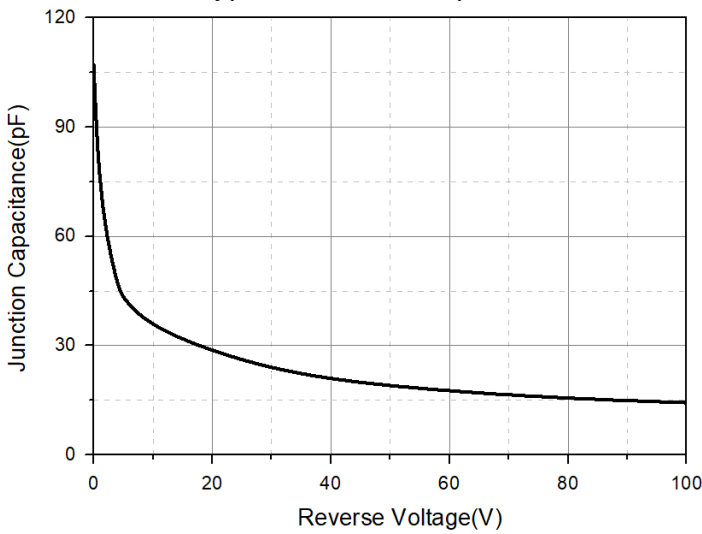
Typical Forward Current Derating Curve



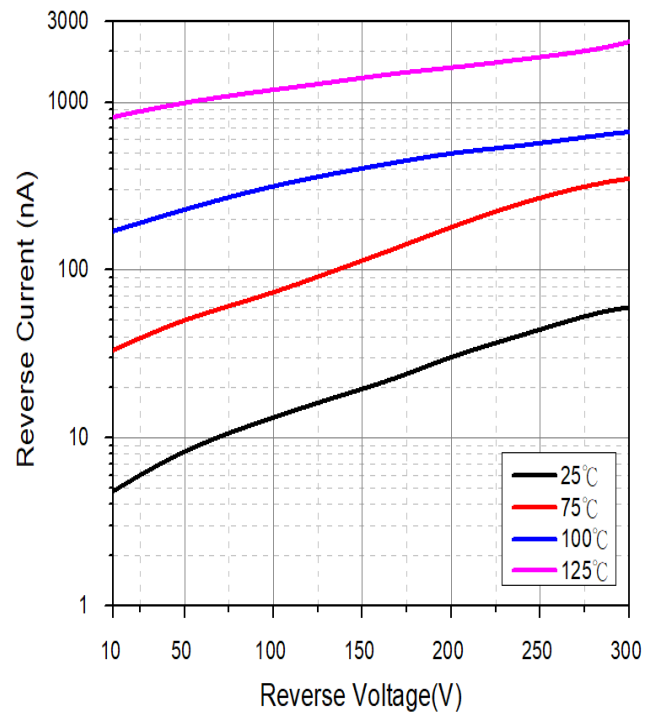
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current

