

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

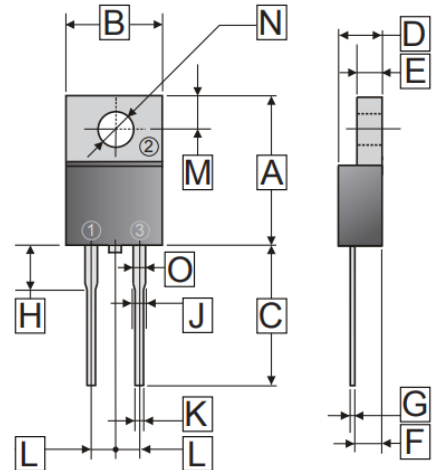
FEATURES

- Fast switching for high efficiency
- 150°C Operating Junction Temperature
- Low Power Loss, High Efficiency
- High-Switching Speed 35 Nanosecond Recovery Time
- Low Forward Voltage, High Current Capability
- Plastic Material Used Carries Underwriters Laboratory Flammability Classification 94V-0

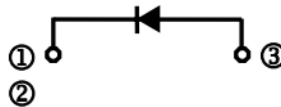
ORDER INFORMATION

Part Number	Type
SF05T60	Lead (Pb)-free
SF05T60-C	Lead (Pb)-free and Halogen-free

TO-220A



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.68	15.50	H	3.57	4.20
B	9.7	10.4	J	-	1.30
C	13.06	14.62	K	0.72	0.96
D	4.22	4.98	L	4.84	5.32
E	1.14	1.38	M	2.48	2.98
F	2.20	2.98	N	φ 3.7	φ 3.9
G	0.27	0.55	O	1.12	1.37



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%.)

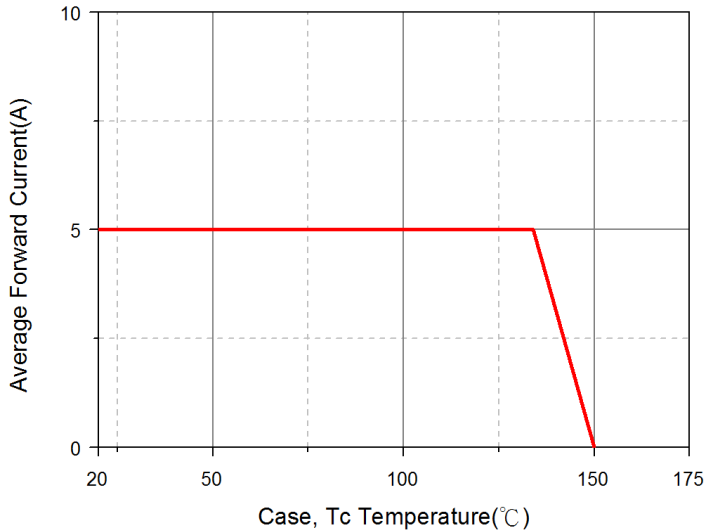
Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	600	V
Working Peak Reverse Voltage	V_{RWM}	600	V
DC Blocking Voltage	V_R	600	V
Average Rectifier Forward Current	$I_{F(AV)}$	5	A
Non-Repetitive Peak Surge Current @ Surge applied at rate load conditions half-wave, single phase, 60Hz	I_{FSM}	60	A
Max. Instantaneous Forward Voltage @ $I_F=5A$	$T_A=25^{\circ}C$	1.55	V
	$T_A=125^{\circ}C$	1.45	
Max. Instantaneous Reverse Current ²	$T_A=25^{\circ}C$	5	μA
	$T_A=125^{\circ}C$	20	
Reverse Recovery Time ³	T_{RR}	35	nS
Typical Junction Capacitance ¹	C_J	15	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:

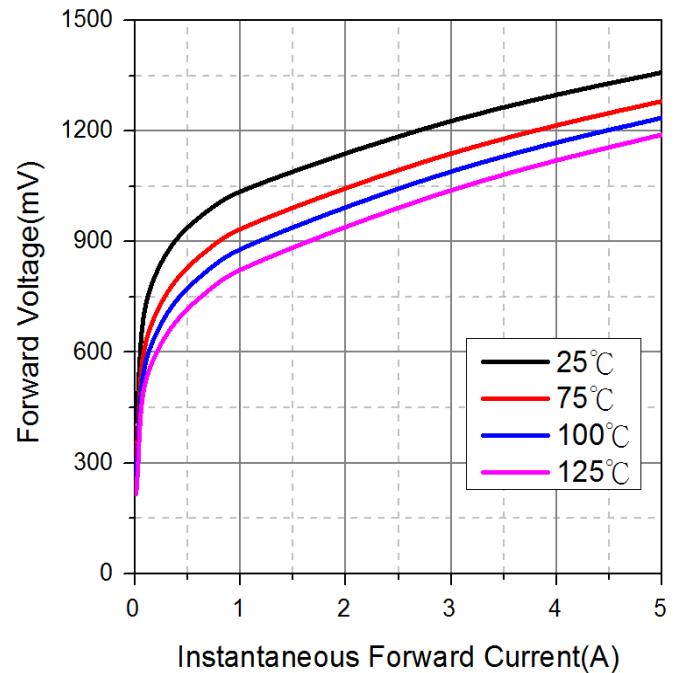
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse Test: Pulse Width=300 μs , Duty Cycle $\leq 2\%$.
3. $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$.

RATINGS AND CHARACTERISTIC CURVES

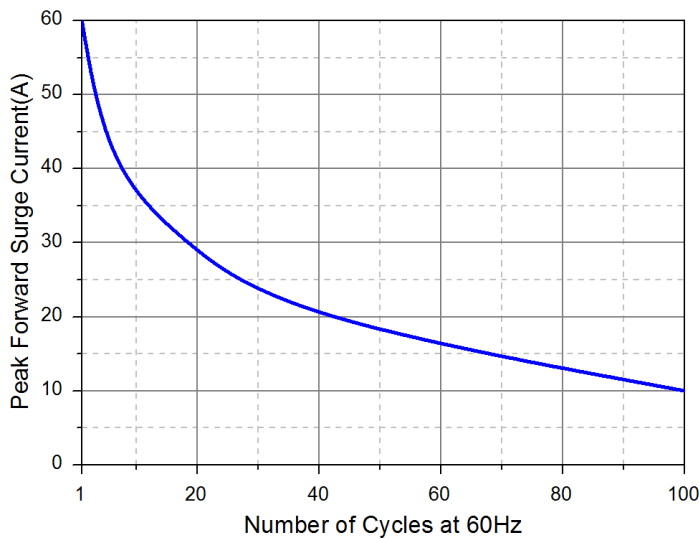
Typical Forward Current Derating Curve



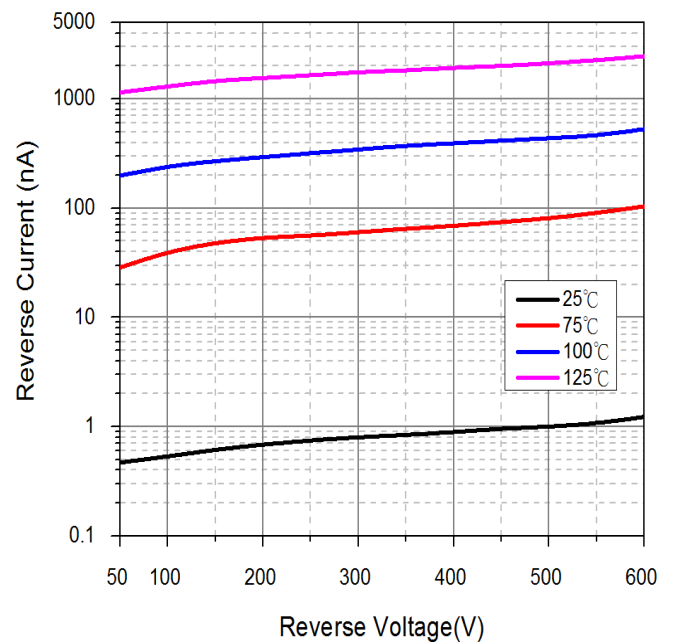
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

