

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

## FEATURES

- High Surge Capacity
- 150°C Operating Junction Temperature
- Low Power Loss, High Efficiency
- High-Switching Speed 50 Nanosecond Recovery Time
- Low Forward Voltage, High Current Capability
- Low Stored Charge Majority Carrier Conduction
- Plastic Material Used Carries Underwriters Laboratory Flammability Classification 94V-0

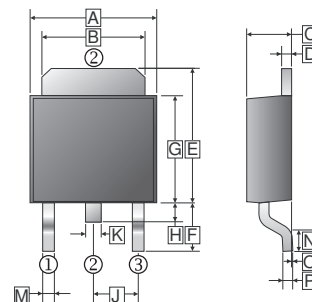
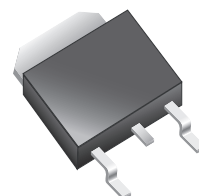
## PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-252	2.5K	13 inch

## ORDER INFORMATION

Part Number	Type
SF08U60DS1	Lead (Pb)-free
SF08U60DS1-C	Lead (Pb)-free and Halogen-free

## TO-252(D-PAK)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.3	6.9	J	2.30	REF.
B	4.95	5.53	K	0.89	REF.
C	2.1	2.5	M	0.45	1.14
D	0.4	0.9	N	1.55	TYP.
E	6	7.7	O	0	0.15
F	2.90	REF.	P	0.58	REF.
G	5.4	6.4			
H	0.6	1.2			



## 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%.)

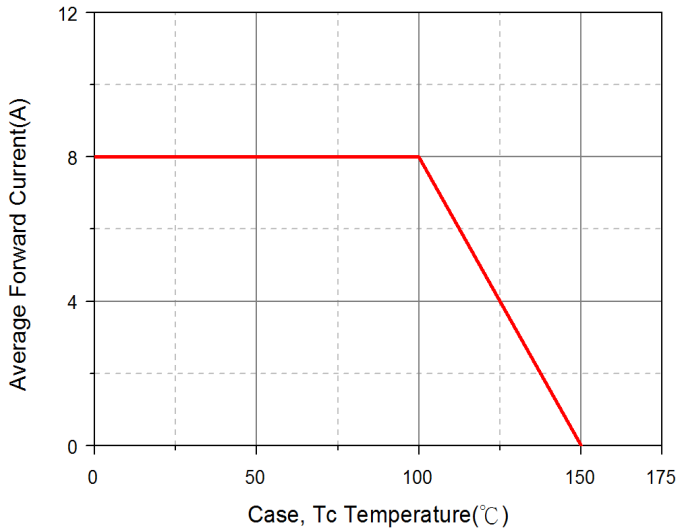
Parameter	Symbol	Rating	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$	600	V
Working Peak Reverse Voltage	$V_{RWM}$	600	V
DC Blocking Voltage	$V_R$	600	V
Average Rectifier Forward Current	$I_{F(AV)}$	8	A
Non-Repetitive Peak Surge Current @Surge applied at rate load conditions half-wave, single phase, 60Hz	$I_{FSM}$	80	A
Max. Instantaneous Forward Voltage @ $I_F=8A$	$T_J=25^\circ C$	1.6	V
	$T_J=125^\circ C$	1.45	
Max. Instantaneous Reverse Current <sup>1</sup>	$T_J=25^\circ C$	5	uA
	$T_J=125^\circ C$	500	
Reverse Recovery Time <sup>2</sup>	$T_{RR}$	50	nS
Typical Junction Capacitance <sup>3</sup>	$C_J$	27	pF
Typical Thermal Resistance <sup>4</sup>	$R_{\theta JC}$	4.5	°C/W
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55~150	°C

Notes:

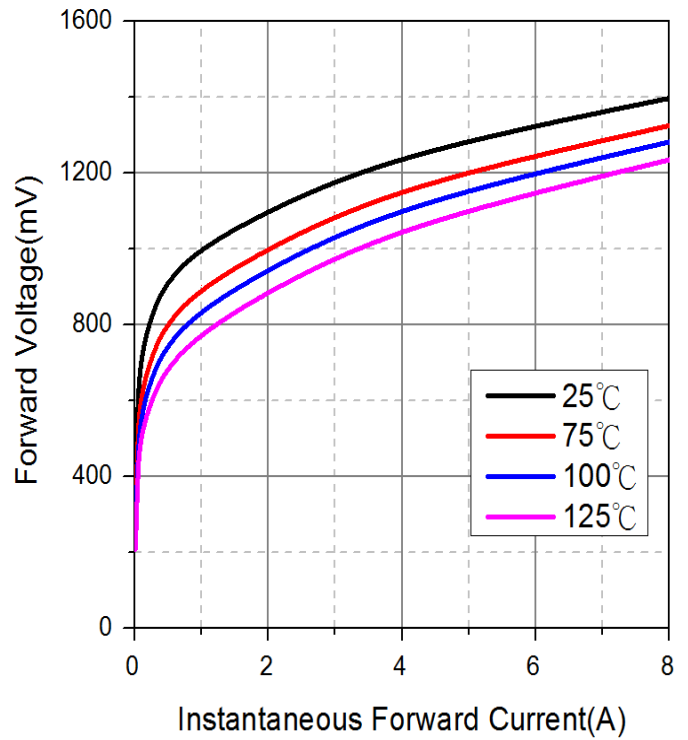
1. Pulse Test: Pulse Width=300µs, Duty Cycle≤2%.
2.  $I_F=0.5A, I_R=1A, I_{RR}=0.25A$ .
3. Measured at 1MHz and applied reverse voltage of 5V D.C.
4. Surface mounted on 10cm x 10cm x 1mm copper pad area.

**RATINGS AND CHARACTERISTIC CURVES**

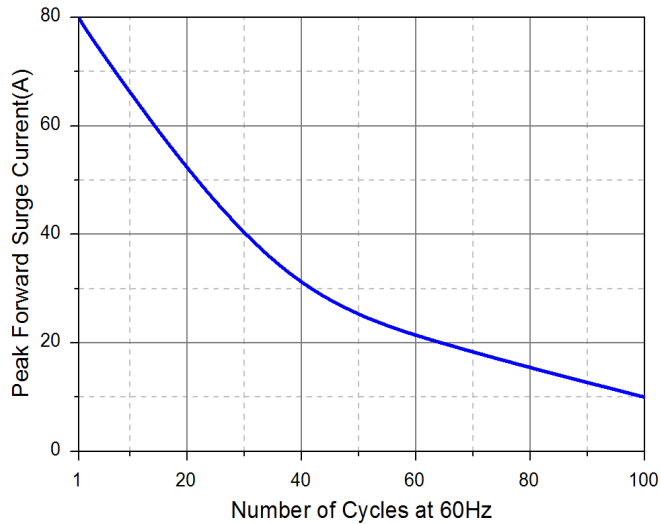
Typical Forward Current Derating Curve



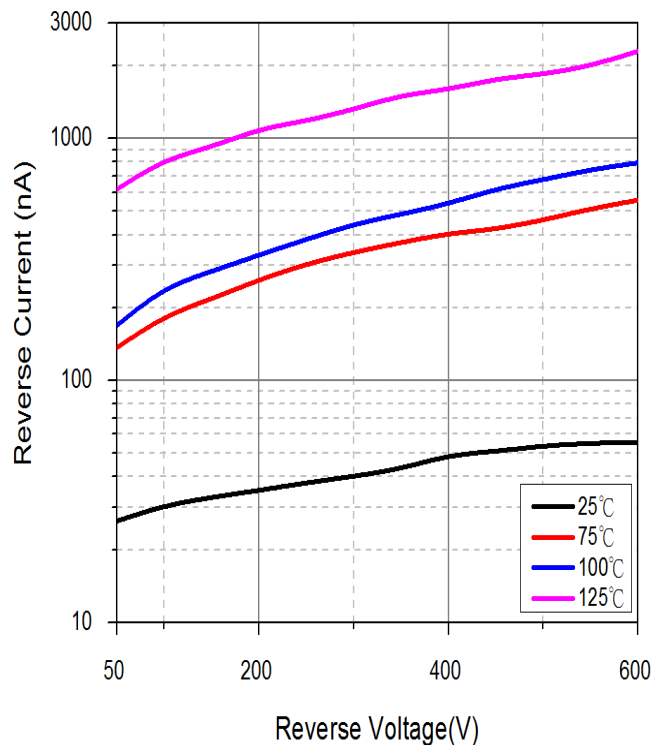
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

