Elektronische Bauelemente

SF08E60DS1

Voltage 600 V

8.0 Amp Super Fast Recovery Rectifier

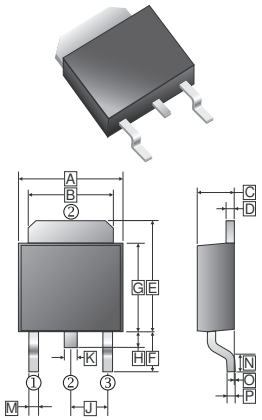
RoHS Compliant Product

A suffix of "-C" specifies halogen free

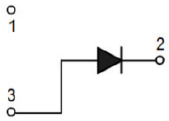
FEATURES

- 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

TO-252 (D-Pack)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.3	6.9	J	2.3 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			



ORDER INFORMATION

Part Number	Type
SF08E60DS1	Lead (Pb)-free
SF08E60DS1-C	Lead (Pb)-free and Halogen-free

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		$I_{F(AV)}$	8	A
Non-Repetitive Peak Surge Current @ Surge applied at rate load conditions half-wave, single phase, 60Hz		I_{FSM}	70	A
Max. Instantaneous Forward Voltage @ I_F=8A		V_F	2.3	V
Max. Instantaneous Reverse Current [2]	T_J=25°C	I_R	5	μA
	T_J=100°C		20	
Reverse Recovery Time [3]		T_{RR}	25	nS
Typical Junction Capacitance [1]		C_J	20	pF
Thermal Resistance [4]		$R_{\theta JC}$	6	°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=300μs, Duty Cycle≦2%.
3. I_F=0.5A, I_R =1A, I_{RR}=0.25A.
4. Surface mounted on 2.5cm x 2.5cm x 0.5mm copper pad area.

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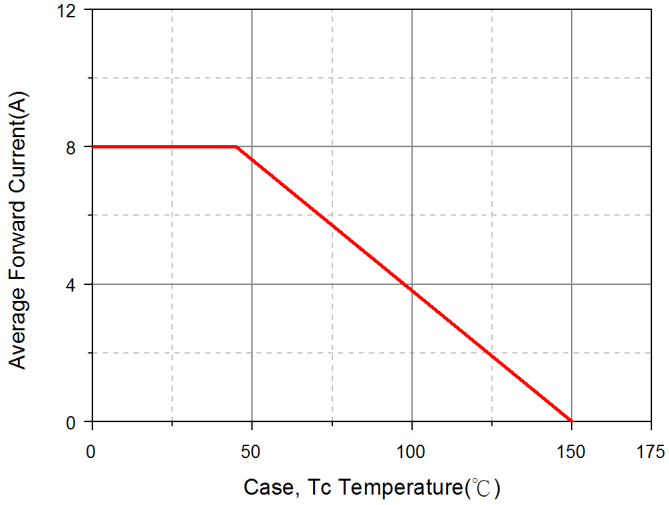
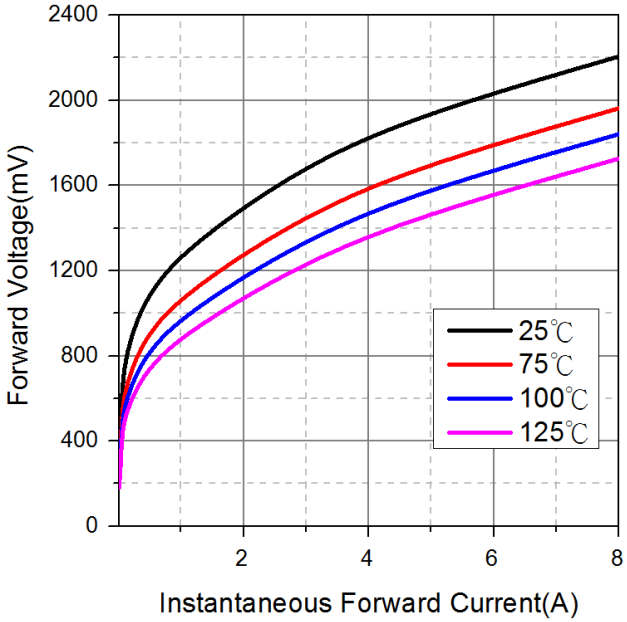
RATINGS AND CHARACTERISTIC CURVES

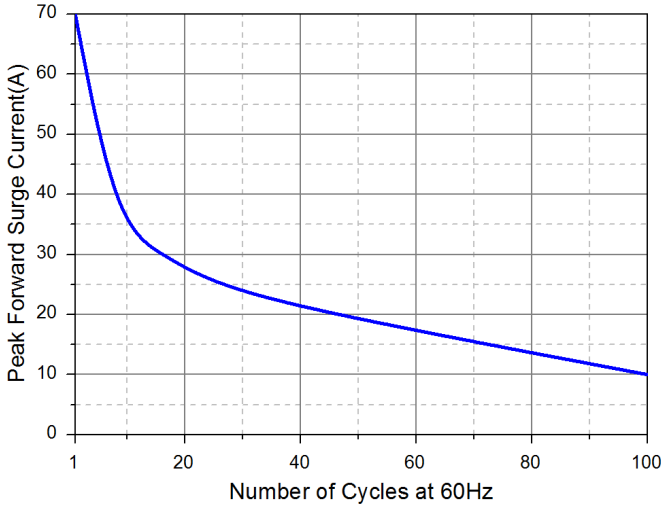
Typical Forward Current Derating Curve



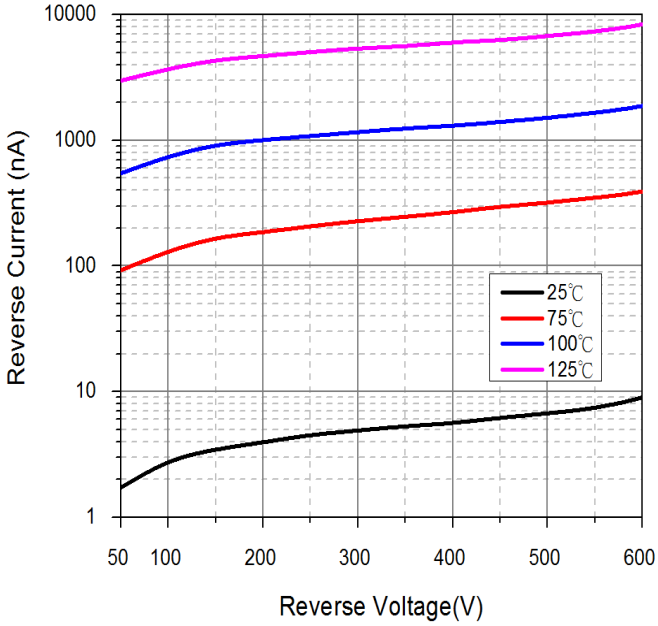
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance