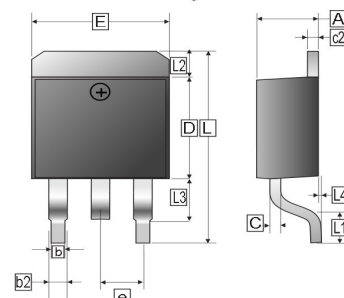
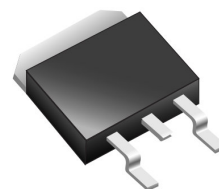


RoHS Compliant Product  
A suffix of "-C" specifies halogen free

## 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-263(D<sup>2</sup>-PAK)

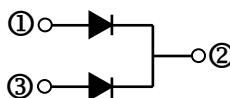


## ORDER INFORMATION

Part Number	Type
SF20ED20D	Lead (Pb)-free
SF20ED20D-C	Lead (Pb)-free and Halogen-free

## PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-263	0.8K	13 inch



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.00	4.87	c2	1.07	1.65
b	0.51	1.01	b2	1.34 REF	
L4	0.00	0.30	D	8.0	9.65
C	0.30	0.74	e	2.54 REF	
L3	1.50 REF		L	14.6	16.1
L1	2.5 REF		L2	1.27 REF	
E	9.60	10.67			

## 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%.)

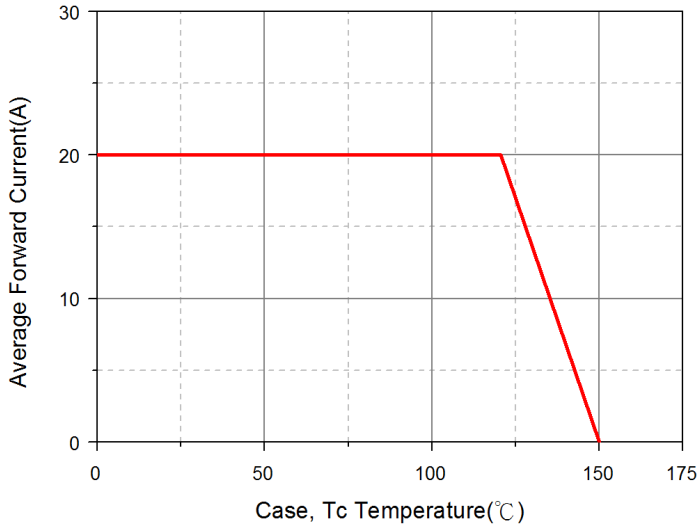
Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	200	V
DC Blocking Voltage	V <sub>R</sub>	200	V
Average Rectifier Forward Current	I <sub>F(AV)</sub>	20	A
Non-Repetitive Peak Surge Current @ Surge applied at rate load conditions half-wave, single phase, 60Hz	I <sub>FSM</sub>	100	A
Max. Instantaneous Forward Voltage @ I <sub>F</sub> =10A	V <sub>F</sub>	0.98	V
Max. Instantaneous Reverse Current <sup>2</sup>	T <sub>J</sub> =25°C	5	µA
	T <sub>J</sub> =125°C	50	
Reverse Recovery Time <sup>3</sup>	T <sub>RR</sub>	25	nS
Typical Junction Capacitance <sup>1</sup>	C <sub>J</sub>	65	pF
Thermal Resistance <sup>4</sup>	R <sub>θJC</sub>	3	°C / W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	150, -55~150	°C

Notes:

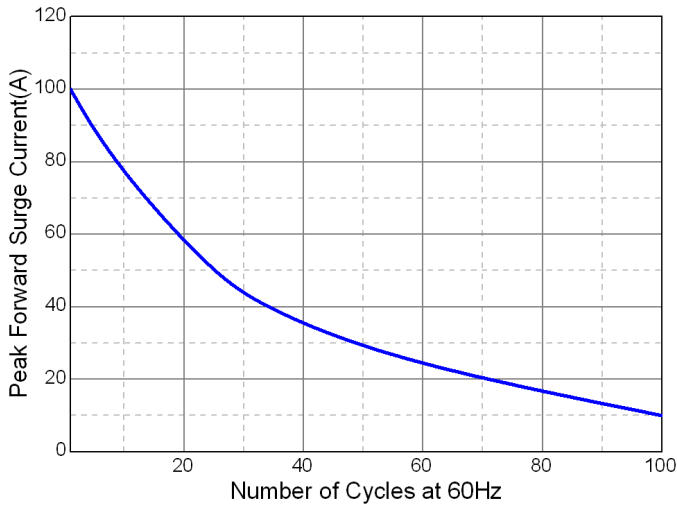
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse Test: Pulse Width=300µs, Duty Cycle ≤2%.
3. I<sub>F</sub>=0.5A, I<sub>R</sub> =1A, I<sub>RR</sub>=0.25A.
4. Surface mounted on 10cm x 10cm x 1mm copper pad area.

**RATINGS AND CHARACTERISTIC CURVES**

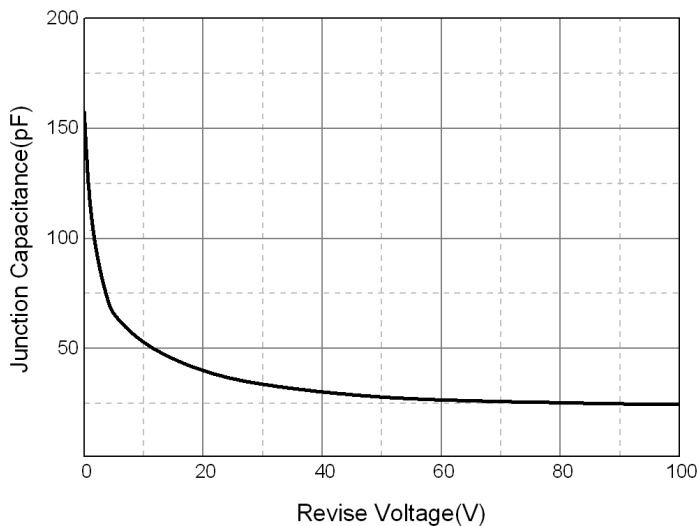
Typical Forward Current Derating Curve



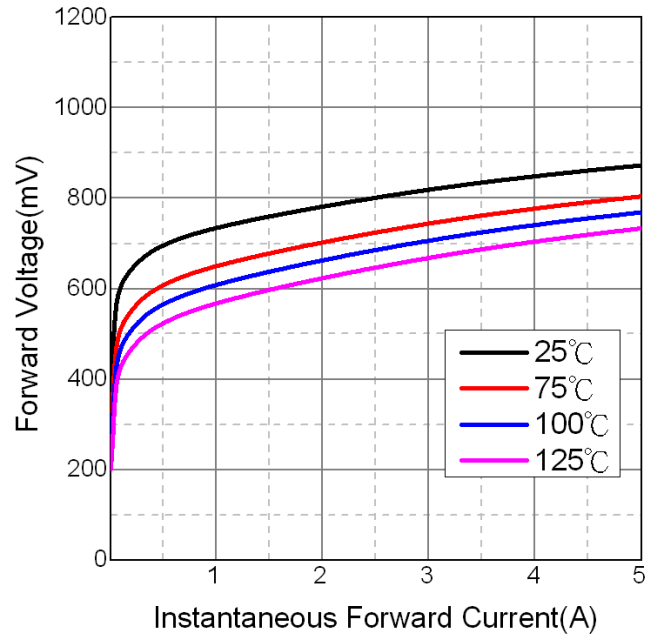
Maximum Non-Repetitive Forward Surge Current



Typical Junction Capacitance



Typical Forward Characteristic



Typical Reverse Characteristic

