

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

FEATURES

- High Surge Capacity
- 175°C Operating Junction Temperature
- Low Power Loss, High Efficiency
- High-Switching Speed 35 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

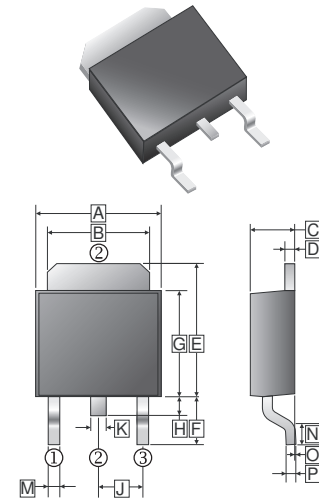
PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-252	2.5K	13 inch

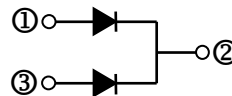
ORDER INFORMATION

Part Number	Type
SF16TD60D1	Lead (Pb)-free
SF16TD60D1-C	Lead (Pb)-free and Halogen-free

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			



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%.)

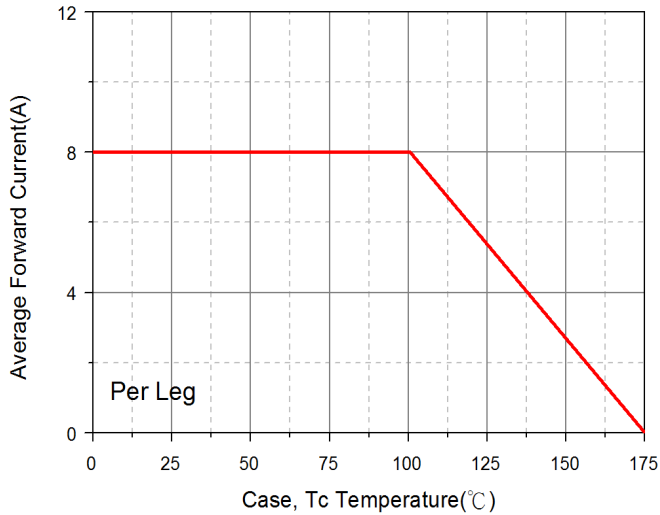
Characteristics		Symbol	Rating	Units
Peak Repetitive Reverse Voltage		V_{RRM}	600	V
Working Peak Reverse Voltage		V_{RWM}	600	V
DC Blocking Voltage		V_R	600	V
Average Rectifier Forward Current	Per Leg	$I_{F(AV)}$	8	A
	Per Device		16	A
Non-Repetitive Peak Surge Current@ Surge applied at rate load conditions half-wave, single phase, 60Hz		I_{FSM}	80	A
Max. Instantaneous Forward Voltage @ $I_F=8A$	$T_J=25^\circ C$	V_F	1.55	V
	$T_J=125^\circ C$		1.45	
Max. Instantaneous Reverse Current ¹	$T_J=25^\circ C$	I_R	5	uA
	$T_J=125^\circ C$		500	
Reverse Recovery Time ²		T_{RR}	35	nS
Typical Junction Capacitance ³		C_J	27	pF
Typical Thermal Resistance ⁴		$R_{\theta JC}$	6	°C / W
Operating Junction and Storage Temperature Range		T_J, T_{STG}	175, -55~150	°C

Notes:

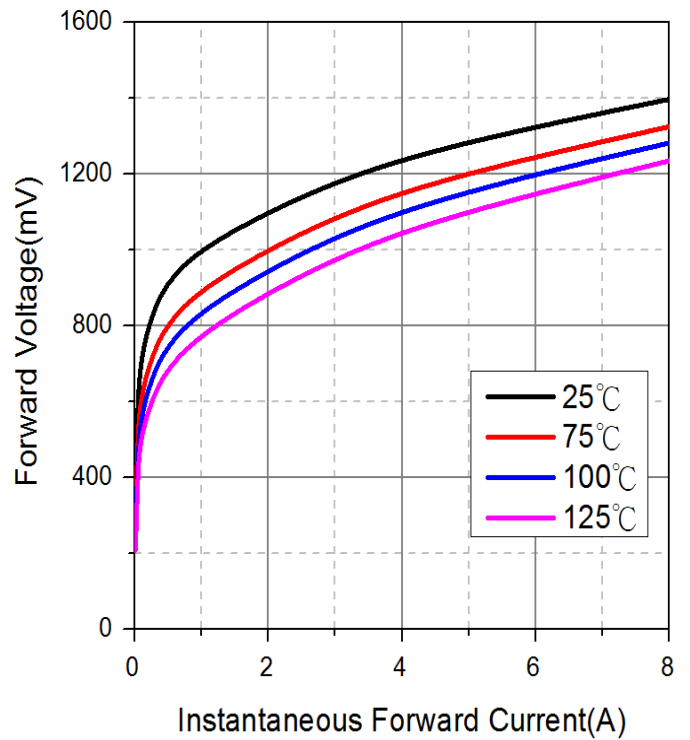
1. Pulse Test: Pulse Width=300µs, Duty Cycle≤2%.
2. $I_F=0.5A, I_R=1A, I_{RR}=0.25A$.
3. Measured at 1MHz and applied reverse voltage of 5V D.C.
4. Surface mounted on 2.5cm x 2.5cm x 0.5mm copper pad area.

RATINGS AND CHARACTERISTIC CURVES

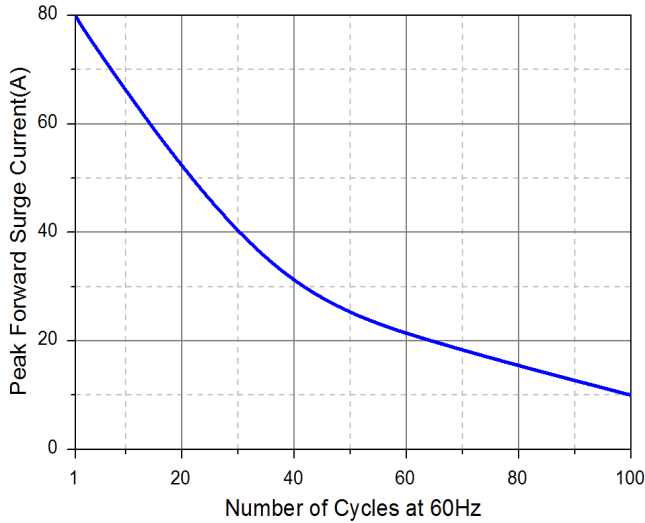
Typical Forward Current Derating Curve



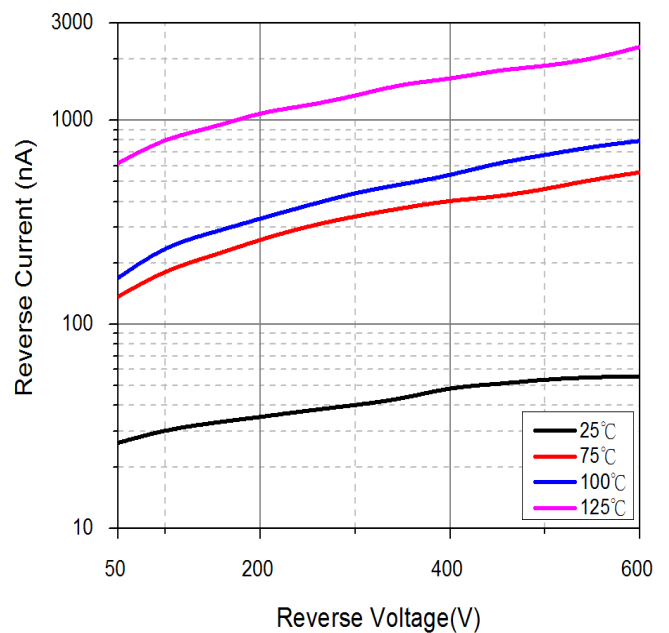
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

