



**Super Fast Recovery Rectifiers**

**Reverse Voltage - 50 to 600 Volts**  
**Forward Current - 5.0 Amperes**

**Features**

- Fast switching for high efficiency
- Low cost
- Low reverse leakage current
- High current capability
- Low forward voltage drop
- Meet UL flammability classification 94V-0

**Mechanical Data**

- Case: JEDEC DO-27 Molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

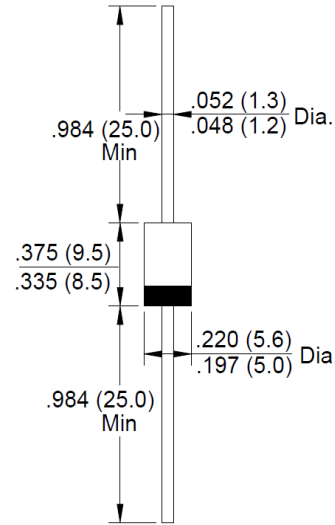
**Applications**

- For use in SMPS, high frequency inverters, PWM and polarity protection applications

**DO-27**



**RoHS COMPLIANT**



Package Outline Dimensions in Inches (Millimeters)

**Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristics	Symbol	SF51	SF52	SF53	SF54	SF55	SF56	SF58	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current @T <sub>A</sub> =55°C	I(AV)	5.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	150							A
Peak Forward Voltage at 5.0A DC (Note1)	V <sub>F</sub>	0.95			1.3		1.7		V
Maximum DC Reverse Current @T <sub>J</sub> =25°C at Rated DC Blocking Voltage @T <sub>J</sub> =100°C	I <sub>R</sub>	5.0 / 100							μA
Maximum Reverse Recovery Time (Note 2)	T <sub>RR</sub>	35							nS
Typical Junction Capacitance (Note3)	C <sub>J</sub>	90			75				pF
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	10							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

- Notes:
1. 300uS pulse width, 2%duty cycle.
  2. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A .
  3. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
  4. The typical data above is for reference only.



Fig. 1 - Forward Current Derating Curve

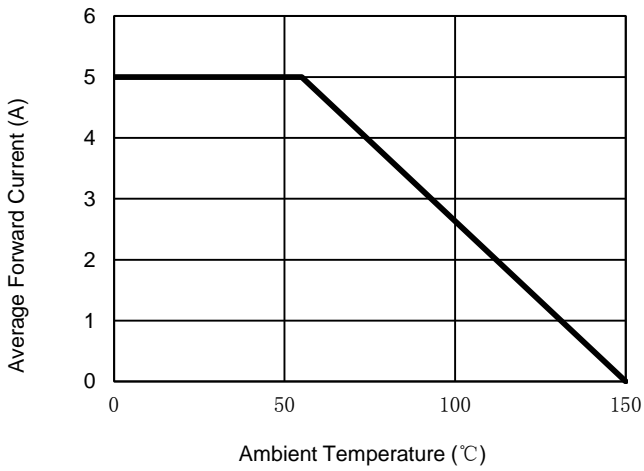


Fig. 2 - Maximum Non-Repetitive Surge Current

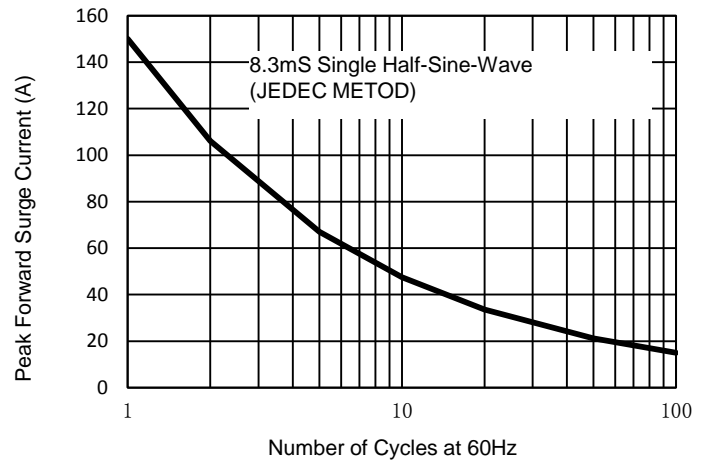


Fig. 3 - Typical Junction Capacitance

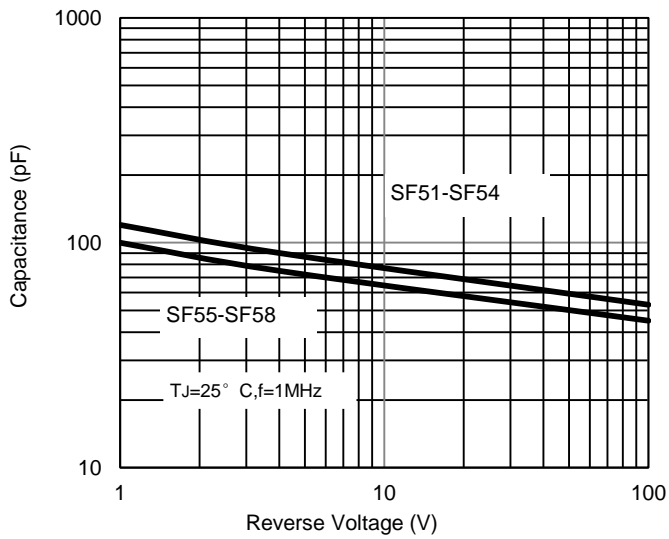


Fig. 4 - Typical Forward Characteristics

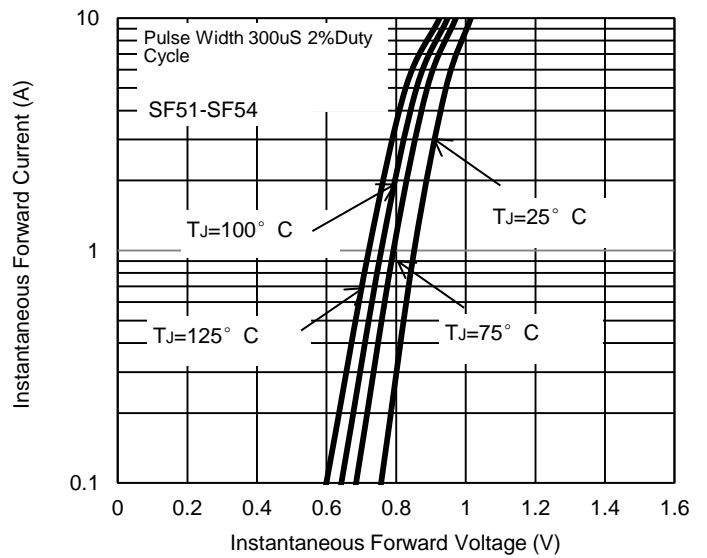


Fig. 5 - Typical Forward Characteristics

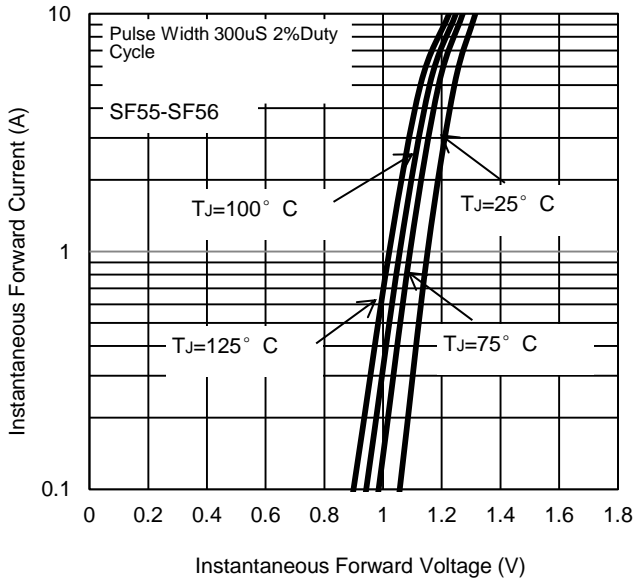
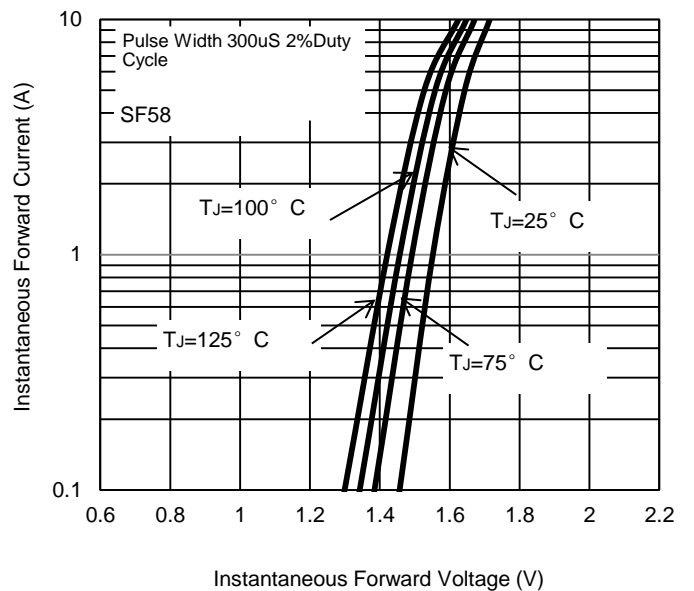


Fig. 6 - Typical Forward Characteristics



The curve above is for reference only.



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