

## Super Fast Recovery Rectifiers 超快恢复整流管

**Reverse Voltage - 50 to 600 Volts**  
反向电压 50-600V  
**Forward Current - 1.0 Amperes**  
正向电流 1.0A

### Features 特征

- Fast switching for high efficiency 高效率，开关速度快
- Low cost 低成本
- Low reverse leakage current 反向漏电流小
- High current capability 通流能力强
- Low forward voltage drop 正向压降低
- Meet UL flammability classification 94V-0  
符合UL 94V-0阻燃等级

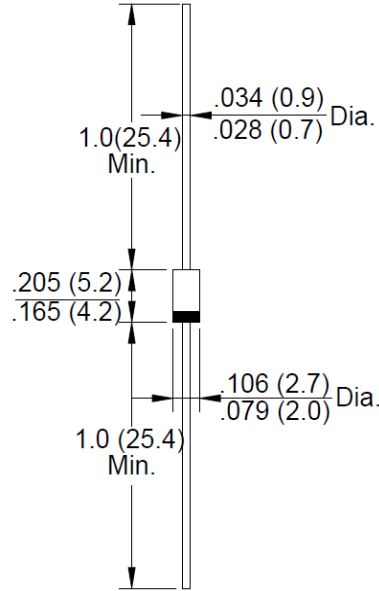
### Mechanical Data 外观信息

- Case: JEDEC DO-41 Molded plastic 封装: JEDEC DO-41塑料
- Polarity: Color band denotes cathode 极性: 阴极色环标识
- Mounting position: Any 安装位置: 任意位置

### Applications 应用

- For use in SMPS, high frequency inverters, PWM and polarity protection applications  
应用于开关电源，高频变换器，脉宽调制器和极性保护

### DO-41



RoHS  
COMPLIANT



Package Outline Dimensions in Inches (Millimeters)  
封装外观尺寸单位英寸(毫米)

### Maximum Ratings and Electrical Characteristics 最大额定值及电气特性

Rating at 25°C ambient temperature unless otherwise specified. 环境温度25°C，除非特别说明。  
Single phase, half wave, 60Hz, resistive or inductive load. 单相半波，60Hz，阻性或感性负载。  
For capacitive load, derate current by 20%. 对于电容性负载，降低20%的额定电流。

Characteristics 特性	Symbol 符号	SF11	SF12	SF13	SF14	SF15	SF16	SF18	Unit 单位	
Maximum Repetitive Peak Reverse Voltage 最大重复峰值反向电压	V <sub>RRM</sub>	50	100	150	200	300	400	600	V	
Maximum RMS Voltage 最大有效反向电压	V <sub>RMS</sub>	35	70	105	140	210	280	420	V	
Maximum DC Blocking Voltage 最大直流阻断电压	V <sub>DC</sub>	50	100	150	200	300	400	600	V	
Maximum Average Forward Rectified Current @T <sub>A</sub> =55°C 最大正向平均整流电流	I <sub>(AV)</sub>	1.0							A	
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method) 8.3mS单一正弦半波叠加在额定负载上的浪涌能力 (JEDEC方法)	I <sub>FSM</sub>	30							A	
Peak Forward Voltage at 1.0A DC (Note1) 在1.0A 电流下的正向峰值电压 (备注1)	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 在额定直流电压下的最大反向直流电流	I <sub>R</sub>	5.0			100				μA	
Maximum Reverse Recovery Time (Note 2) 最大反向恢复时间 (备注2)	T <sub>rr</sub>	35							nS	
Typical Junction Capacitance (Note3) 典型结电容值 (备注3)	C <sub>J</sub>	30				25				pF
Typical Thermal Resistance Junction to Ambient 结到环境的典型热阻值	R <sub>θJA</sub>	40							°C/W	
Operating Junction Temperature Range 结温工作范围	T <sub>J</sub>	-55 to +150							°C	
Storage Temperature Range 储存温度范围	T <sub>STG</sub>	-55 to +150							°C	

Notes: 1. 300uS pulse width, 2% duty cycle. 300uS脉宽，2%占空比。  
2. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A. 测试条件为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. 在1MHz, 4.0V条件下测试。  
4. The typical data above is for reference only. 典型值仅供参考。

Fig. 1 - Forward Current Derating Curve

图1 正向电流降额曲线

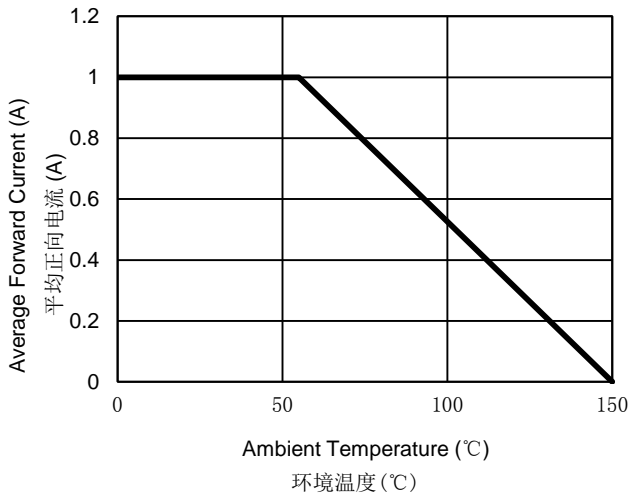


Fig. 2 - Maximum Non-Repetitive Surge Current

图2 最大不重复正向浪涌曲线

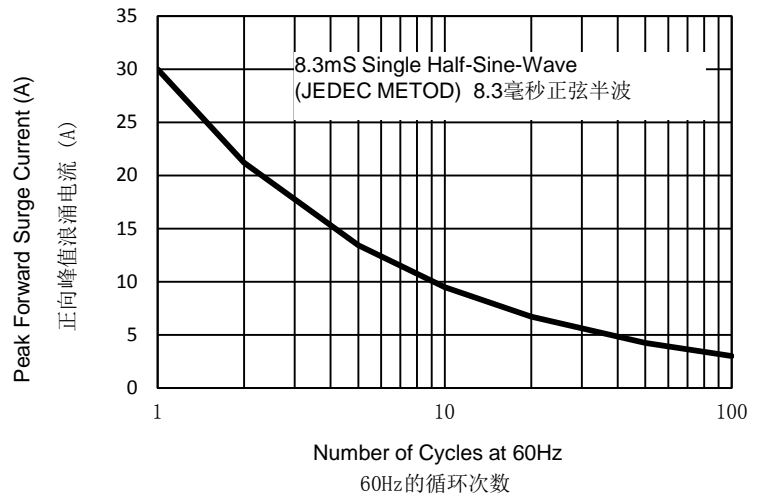


Fig. 3 - Typical Junction Capacitance

图3 典型的结电容

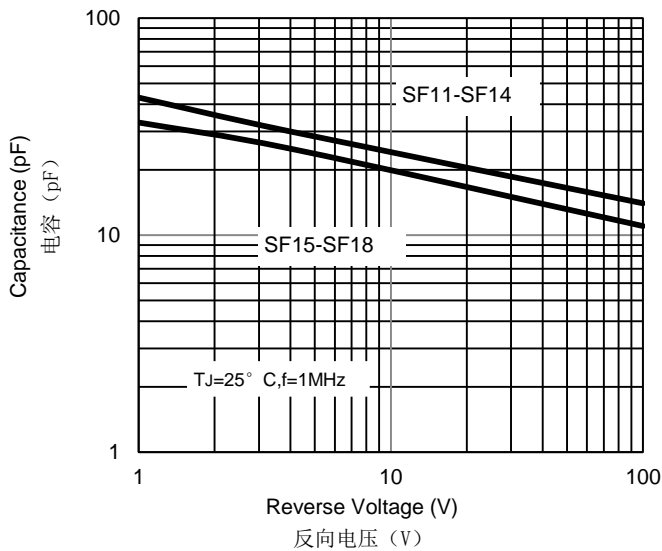


Fig. 4 - Typical Forward Characteristics

图4 典型的正向特性

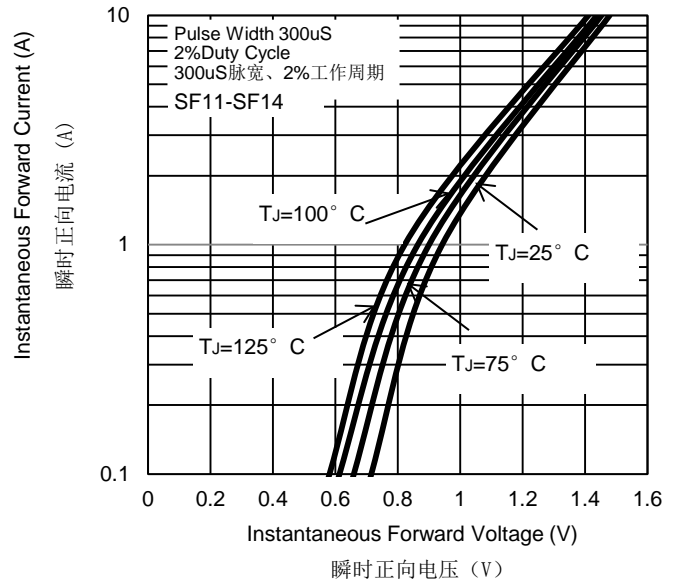


Fig. 5 - Typical Forward Characteristics

图5 典型的正向特性

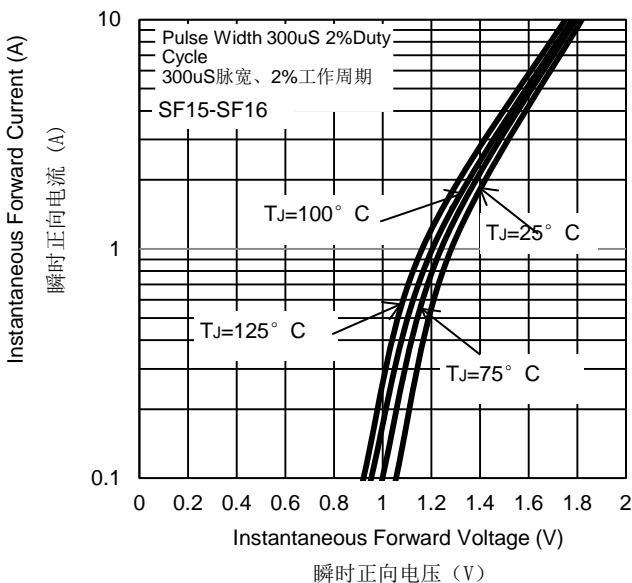
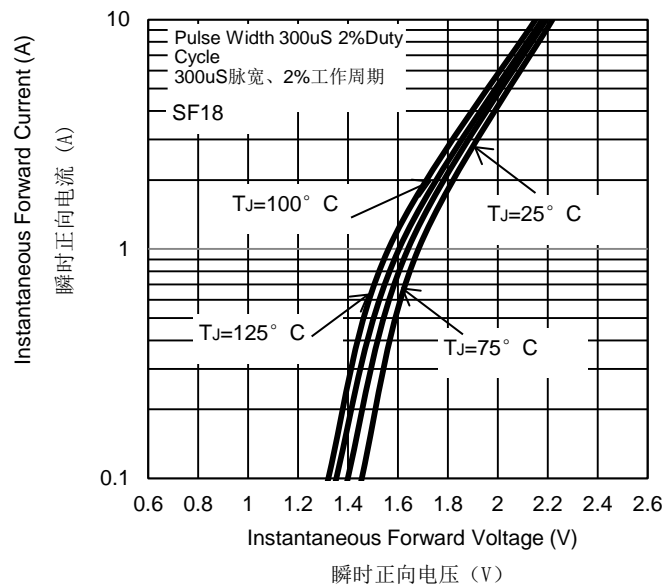


Fig. 6 - Typical Forward Characteristics

图6 典型的正向特性



The curve above is for reference only. 曲线图仅供参考。



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