

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 - 16.0 Amperes
正向电流 16.0A

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

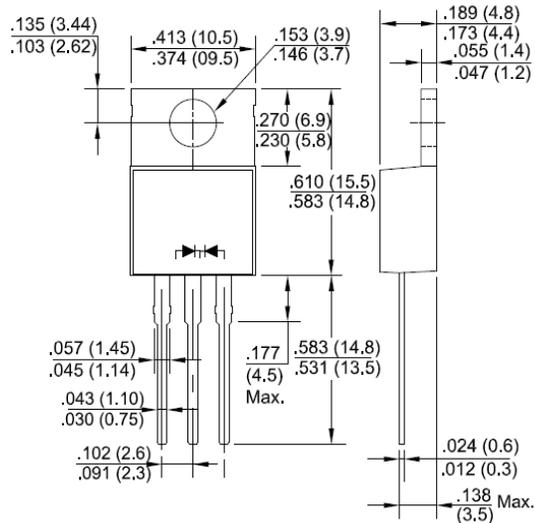
Mechanical Data 外观信息

- Case: TO-220AB Molded plastic 封装: TO-220AB塑封
- Polarity: Polarity: As marked on the body 极性: 标识在体上
- 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

TO-220AB



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	SF 1601CT	SF 1602CT	SF 1603CT	SF 1604CT	SF 1605CT	SF 1606CT	SF 1608CT	Unit 单位
Maximum Repetitive Peak Reverse Voltage 最大重复峰值反向电压	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage 最大有效反向电压	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage 最大直流阻断电压	V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current @ T _A =75°C 最大正向平均整流电流	I _(AV)	16.0							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 _{FSM}	125							A
Peak Forward Voltage at 8.0A DC (Note1) 在8.0A 电流下的正向峰值电压（备注1）	V _F	1.0			1.3		1.7		V
Maximum DC Reverse Current @T _J =25°C at Rated DC Blocking Voltage @T _J =100°C 在额定直流电压下的最大反向直流电流	I _R	10			150				μA
Maximum Reverse Recovery Time (Note 2) 最大反向恢复时间（备注2）	T _{RR}	35							nS
Typical Junction Capacitance (Note3) 典型结电容值（备注3）	C _J	40							pF
Typical Thermal Resistance Junction to Ambient 结到环境的典型热阻值	R _{θJA}	2.5							°C/W
Operating Junction Temperature Range 结温工作范围	T _J ,T _{STG}	-55 to + 150							°C

Notes: 1. 300uS pulse width, 2% duty cycle. 300uS脉宽，2%占空比。

2. Measured with I_F=0.5A, I_R=1A, I_{RR}=0.25A . 测试条件为I_F=0.5A, I_R=1A, I_{RR}=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

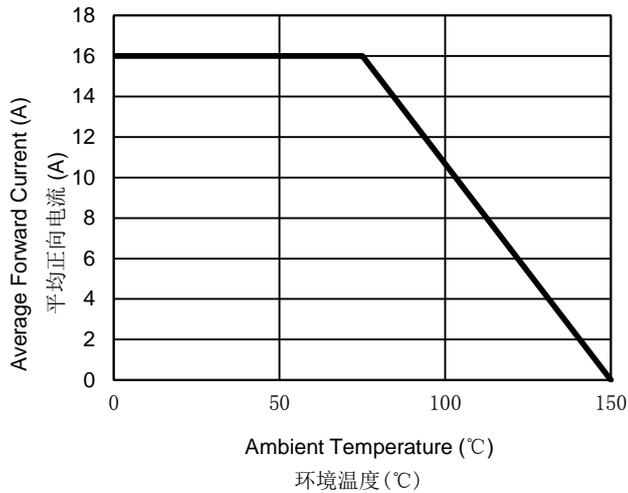


Fig. 2 - Maximum Non-Repetitive Surge Current

图2 最大不重复正向浪涌曲线

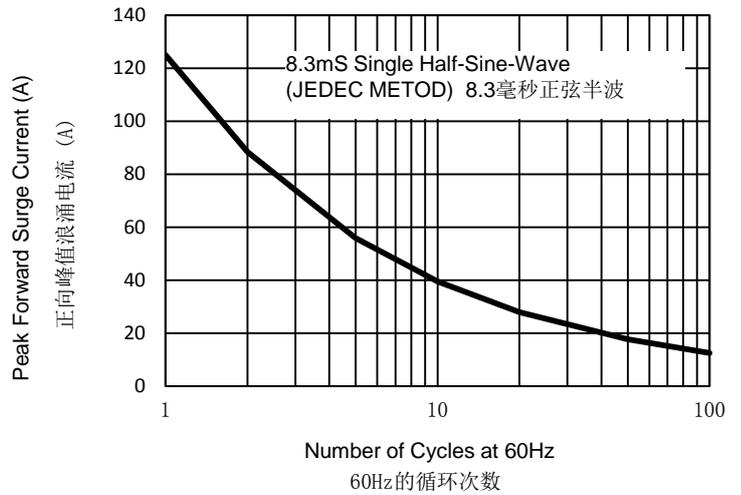


Fig. 3 - Typical Reverse Characteristics

图3 典型的反向特性

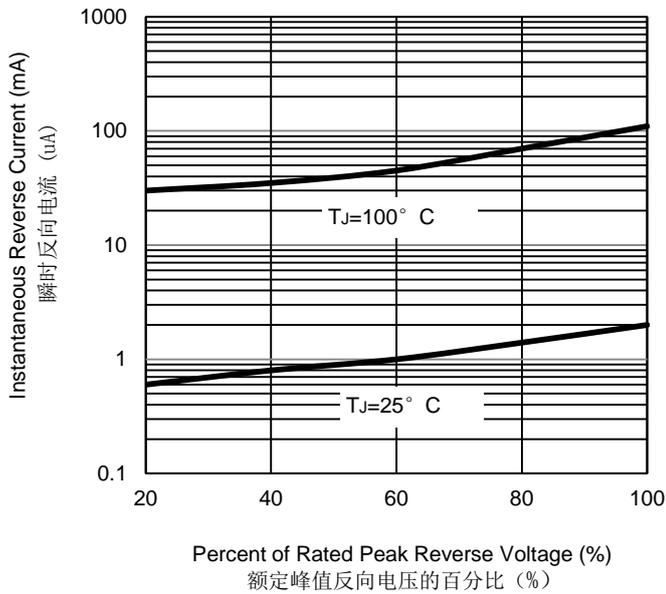


Fig. 4 - Typical Forward Characteristics

图4 典型的正向特性

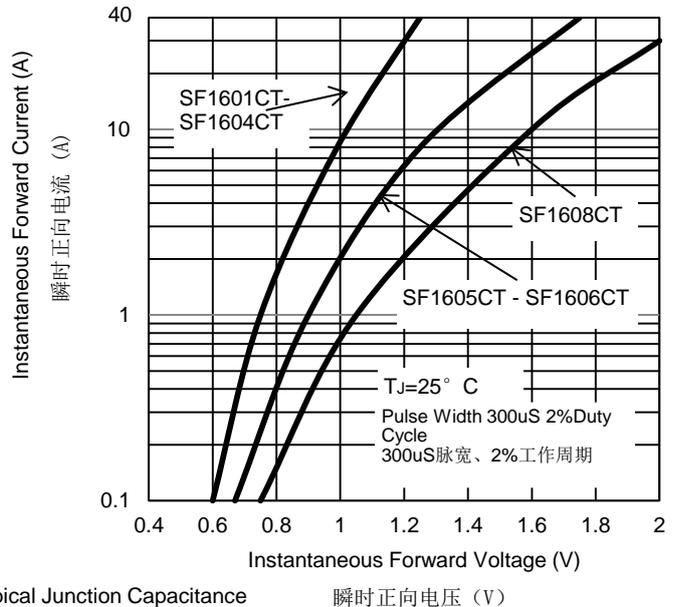
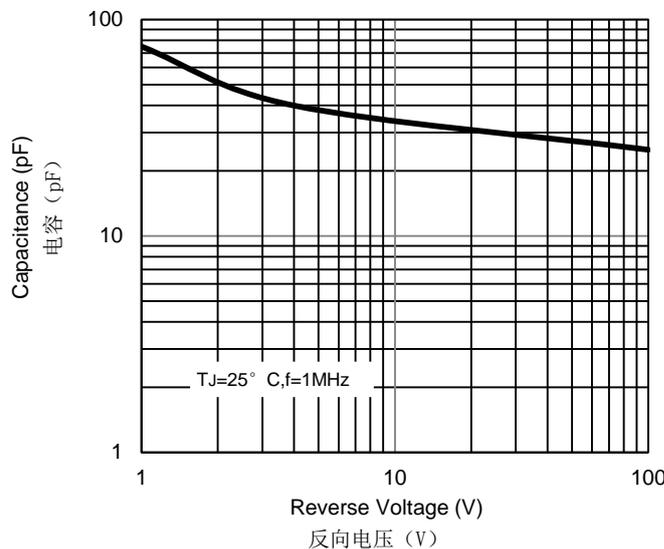


Fig. 5 - Typical Junction Capacitance

图5 典型的结电容



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



Disclaimer

ALL specifications and data are subject to be changed without notice to improve reliability function or design or other reasons.

HY makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, HY disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on HY's knowledge of typical requirements that are often placed on HY products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify HY's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, HY products are not designed for use in medical, life-saving, or life-sustaining applications or for any other applications in which the failure of the HY product could result in personal injury or death. Customers using or selling HY products not expressly indicated for use in such applications do so at their own risk. Please contact authorized HY personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of HY. Product names and markings noted herein may be trademarks of their respective owners.

声明

所有的规格及数据如因改进可靠性、功能、设计或其他原因发生变更，恕不另行通知。

HY 对产品特定用途的适用性或任何产品的连续生产不做担保、陈述或保证。在可适用法律允许的最大程度上，HY 不承担 (i) 因应用或使用任何产品产生的任何及全部责任，(ii) 包括但不限于特定、连带或附带损害产生的任何及全部责任，(iii) 不做任何形式默认担保，包括不保证特定用途的使用性、非侵权及商业适销性。

关于产品适用于某类应用的声明以 HY 掌握的 HY 产品一般应用环境下的典型要求为准。此类声明与产品特定应用的适用性声明不存在任何关联。客户自行负责根据产品技术规格的说明认证特定产品是否适用于特定的应用。数据手册和技术规格中提供的参数可能因不同的应用而异，而且性能可能随时间而变化。所有工作参数，包括电型参数，必须有客户的技术专家根据每一个客户应用环境确认。产品技术规格不扩展或不以其他方式修改 HY 的采购条款与条件或不以其他方式修改 HY 的采购条款与条件，包括但不限于规定的质保条件。

除非书面注明，否则 HY 产品不用于医疗、救护或生命维护，或其他因 HY 产品发生故障有可能导致人身伤亡的应用场合。客户使用或销售未明确指示可在上诉应用中使用的 HY 产品风险自负。如欲获得有关指定用于上诉应用的产品的书面条款及条件，请与 HY 授权人员联系。

本档或任何 HY 的行为不以禁止反言或其他方式授予任何知识产权的许可，无论显示还是暗示。本文提到的产品名称和标识可能为各自所有者的商标。