

Super Fast Recovery Rectifiers

Reverse Voltage - 50 to 600 Volts
Forward Current - 16.0 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

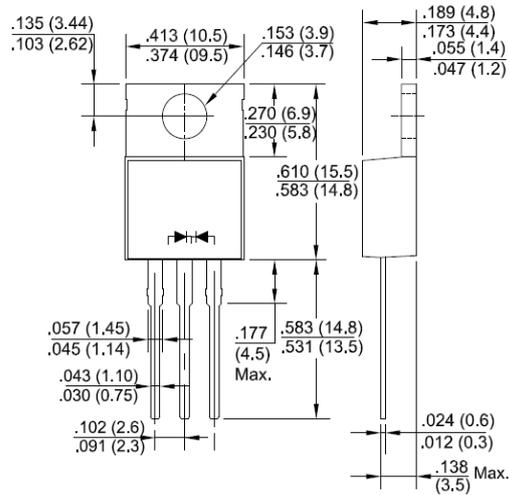
Mechanical Data

- Case: TO-220AB Molded plastic
- Polarity: Polarity: As marked on the body
- Mounting position: Any

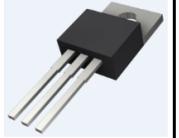
Applications

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

TO-220AB



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	SF 1601CT	SF 1602CT	SF 1603CT	SF 1604CT	SF 1605CT	SF 1606CT	SF 1608CT	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current @ T _A =75°C	I _(AV)	16.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	125							A
Peak Forward Voltage at 8.0A DC (Note1)	V _F	1.0			1.3		1.7		V
Maximum DC Reverse Current @ T _J =25°C	I _R	10							μA
at Rated DC Blocking Voltage @ T _J =100°C		150							
Maximum Reverse Recovery Time (Note 2)	T _{RR}	35							nS
Typical Junction Capacitance (Note3)	C _J	40							pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	2.5							°C/W
Operating Junction Temperature Range	T _J , T _{STG}	-55 to + 150							°C

Notes: 1. 300uS pulse width, 2%duty cycle.

2. Measured with 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.
4. The typical data above is for reference only

Fig. 1 - Forward Current Derating Curve

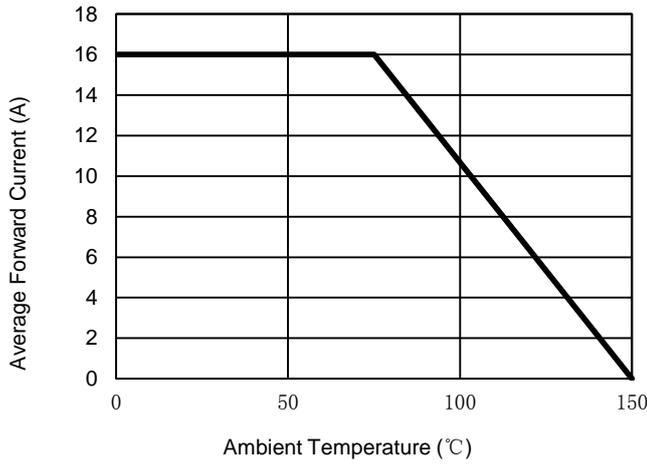


Fig. 2 - Maximum Non-Repetitive Surge Current

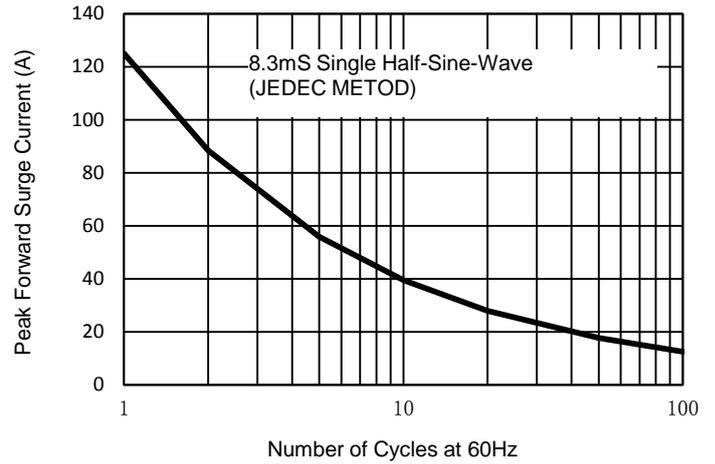


Fig. 3 - Typical Reverse Characteristics

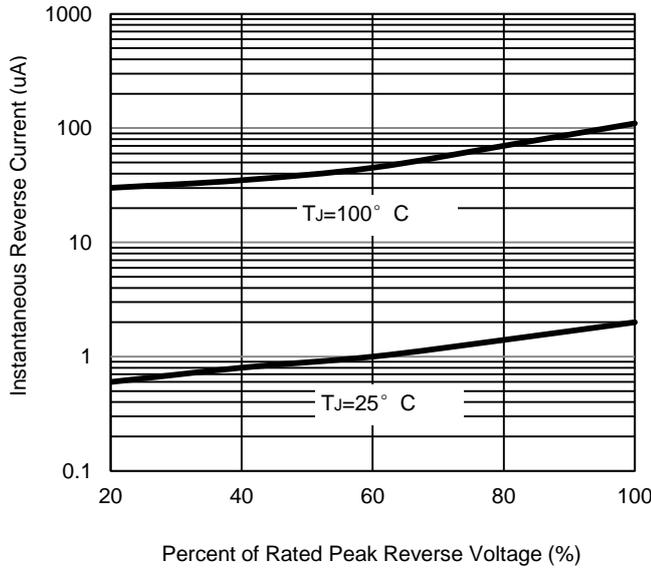


Fig. 4 - Typical Forward Characteristics

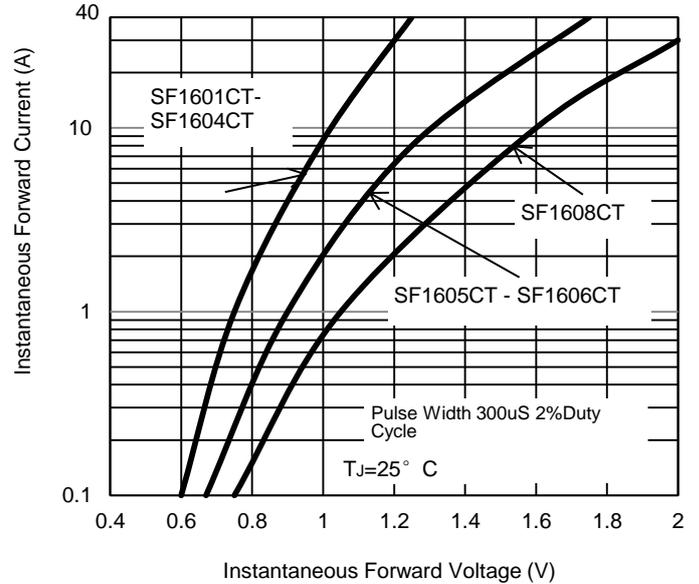
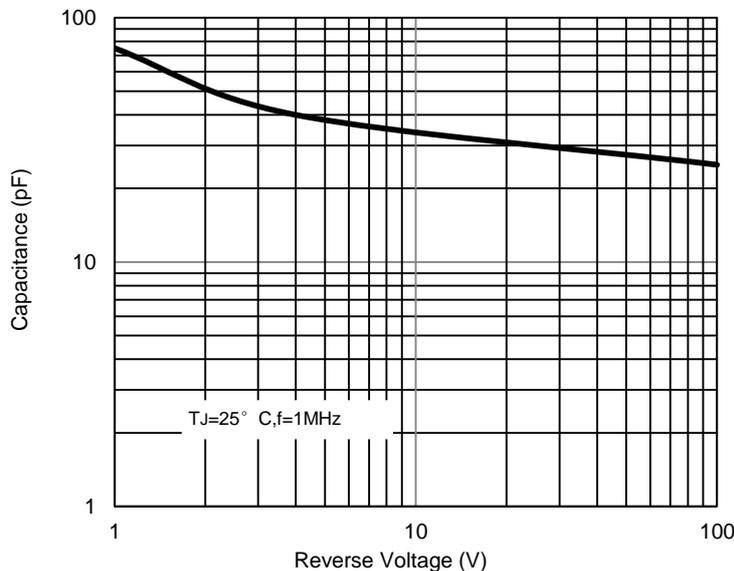


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.

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