SF1601 THRU SF1608

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

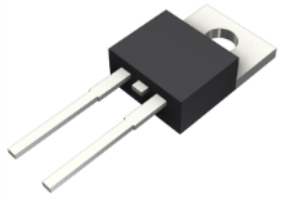
- Case: TO-220AC Molded plastic
- Polarity: Polarity: As marked on the body
- Mounting position: Any

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

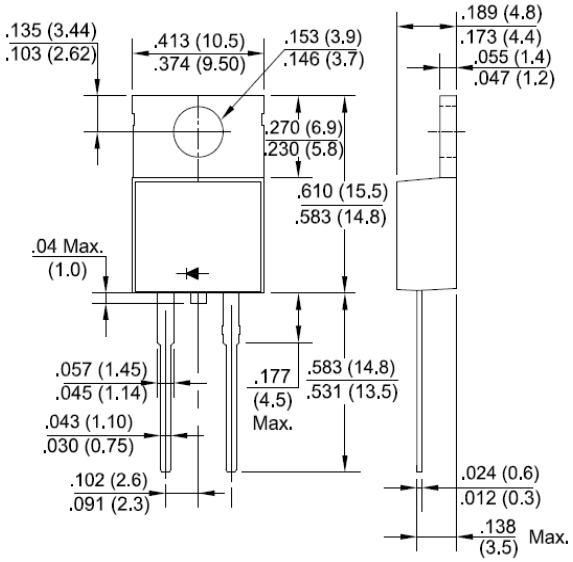
Applications

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

TO-220AC



RoHS COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

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

Characteristics	Symbol	SF 1601	SF 1602	SF 1603	SF 1604	SF 1605	SF 1606	SF 1608	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℃	$I_{(AV)}$	16.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	200							A
Peak Forward Voltage at 16.0A DC (Note1)	V_F	1.0				1.3		1.7	V
Maximum DC Reverse Current @T_J=25℃	I_R	10							μA
at Rated DC Blocking Voltage @T_J=100℃		150							
Maximum Reverse Recovery Time (Note 2)	T_{RR}	35							nS
Typical Junction Capacitance (Note3)	C_J	80							pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	2.5							℃/W
Operating Junction Temperature Range	T_J,T_{STG}	-55 to + 150							℃

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

2. Measured with IF=0.5A,IR=1A,IRR=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

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Fig. 1 - Forward Current Derating Curve

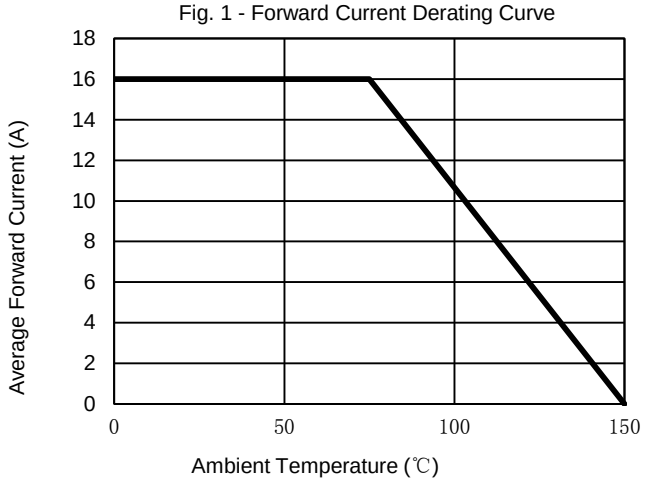


Fig. 2 - Maximum Non-Repetitive Surge Current

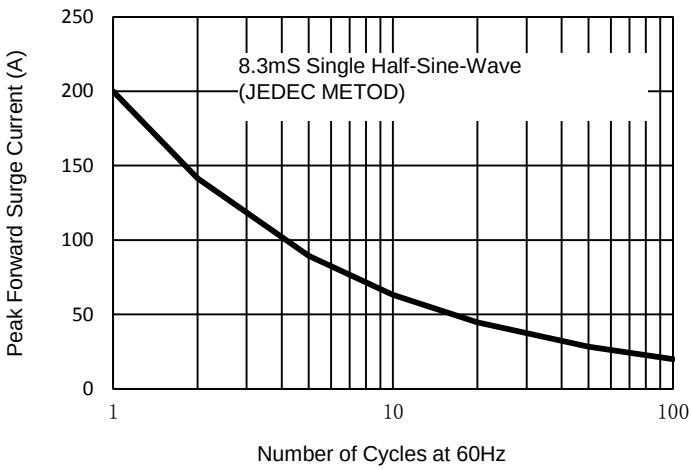


Fig. 3 - Typical Reverse Characteristics

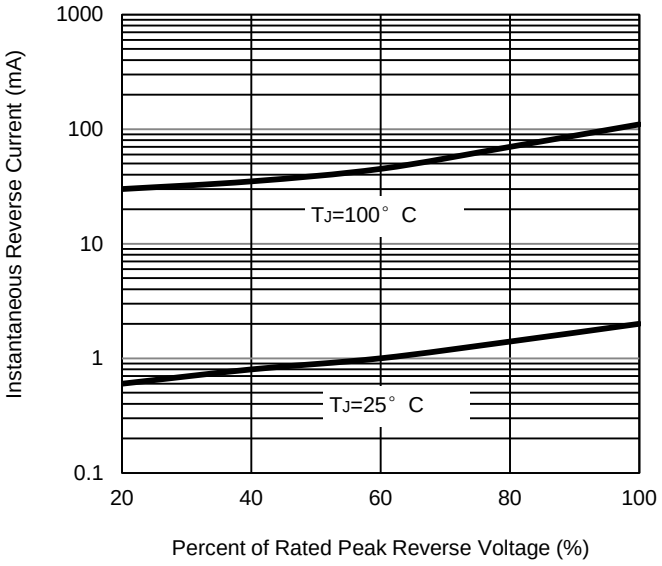


Fig. 4 - Typical Forward Characteristics

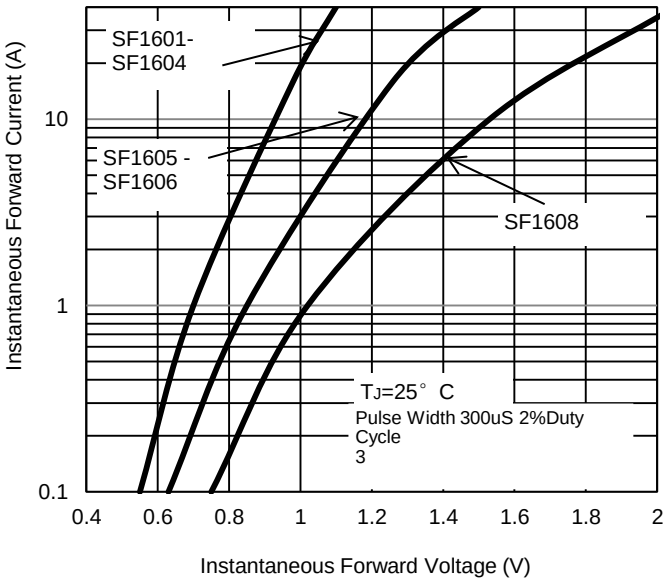
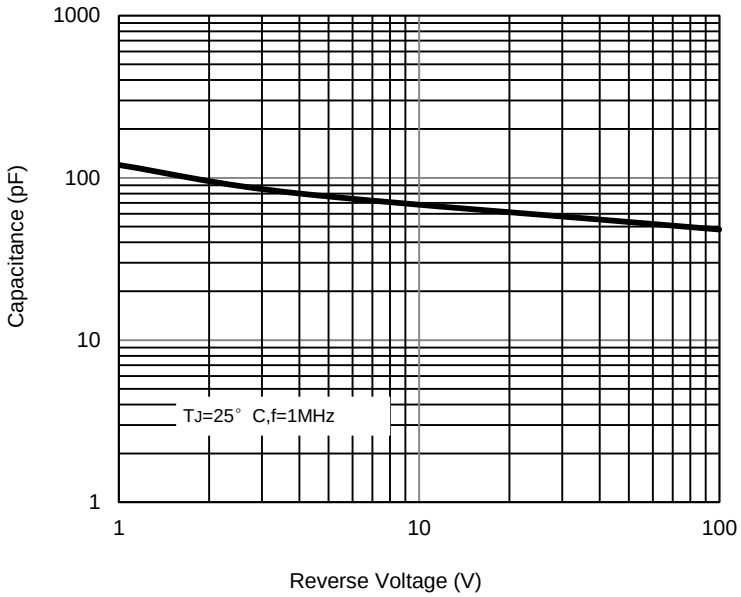


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.

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