



Super Fast Recovery Rectifiers

Reverse Voltage - 50 to 600 Volts

Forward Current - 4.0 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

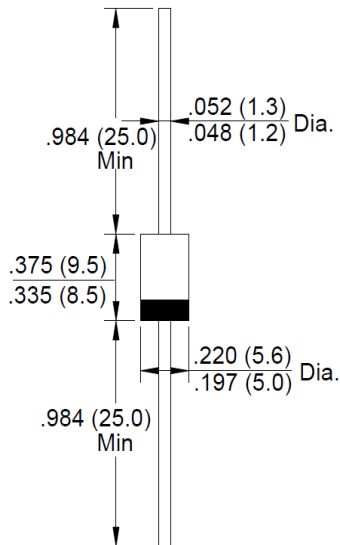
- Case: JEDEC DO-27 Molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

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
- Fast switching for high efficiency

DO-27



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	SF41	SF42	SF43	SF44	SF45	SF46	SF48	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 =55℃	I(AV)	4.0							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 4.0A DC (Note1)	V _F	0.95				1.3		1.7	V
Maximum DC Reverse Current @T _J =25℃	I _R	5.0							μA
at Rated DC Blocking Voltage @T _J =100℃		100							
Maximum Reverse Recovery Time (Note 2)	T _{rr}	35							nS
Typical Junction Capacitance (Note3)	C _J	80				60			pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	15							℃/W
Operating Junction Temperature Range	T _J	-55 to +150							℃
Storage Temperature Range	T _{STG}	-55 to +150							℃

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.

SF4*-A-00-00

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Fig. 1 - Forward Current Derating Curve

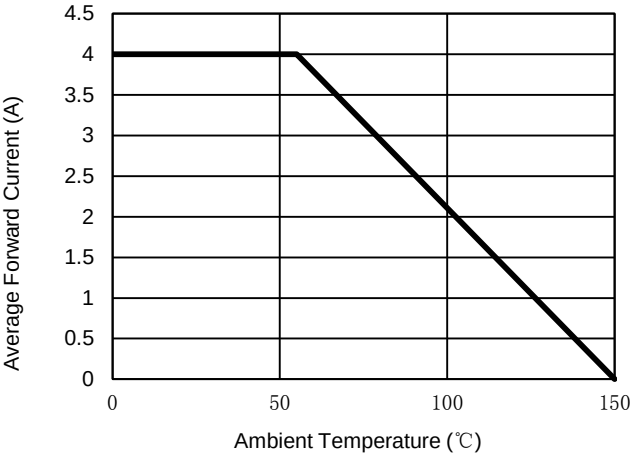


Fig. 2 - Maximum Non-Repetitive Surge Current

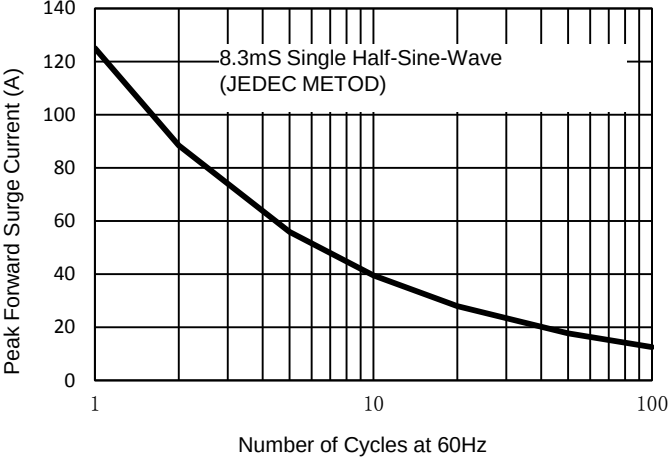


Fig. 3 - Typical Junction Capacitance

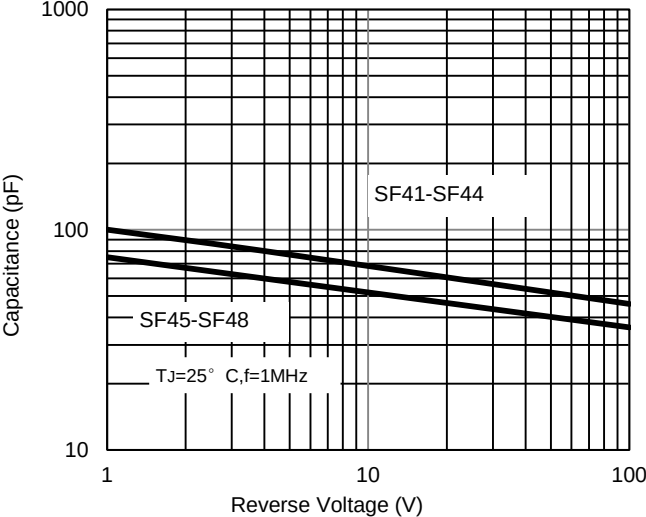


Fig. 4 - Typical Forward Characteristics

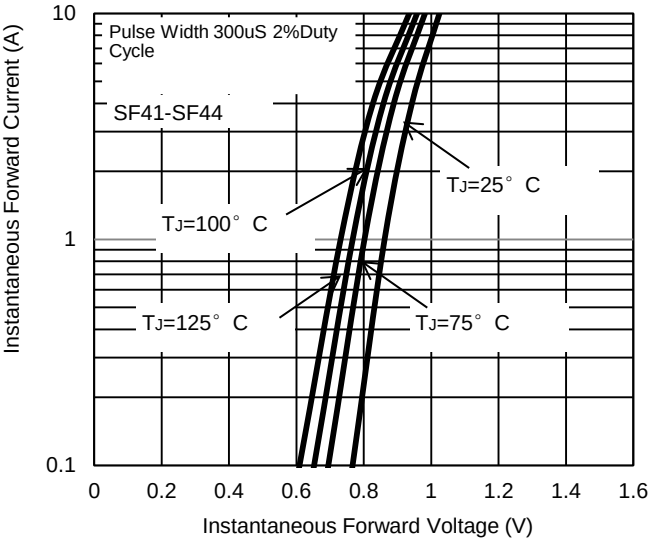


Fig. 5 - Typical Forward Characteristics

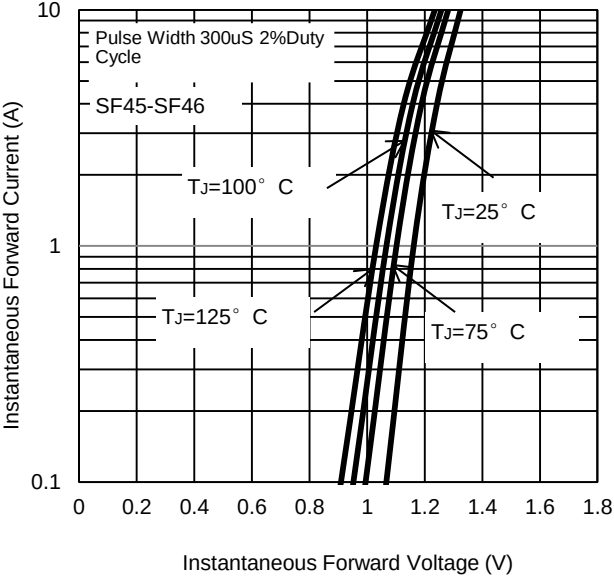
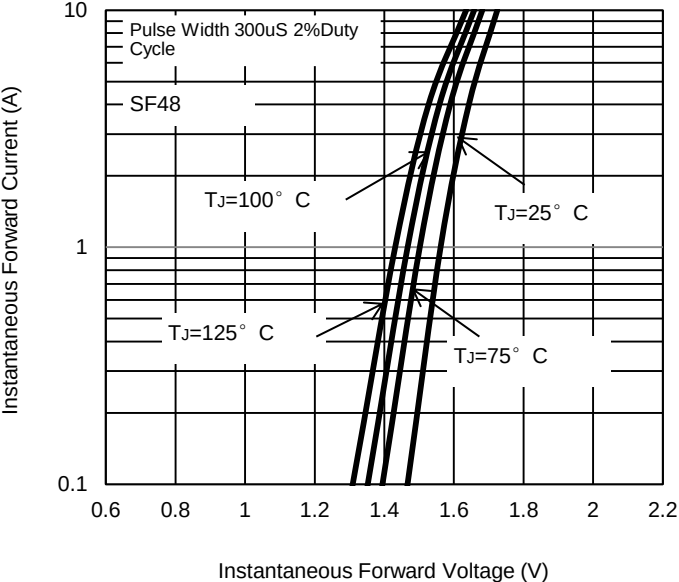


Fig. 6 - Typical Forward Characteristics



The curve above is for reference only.



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