

SUPER FAST RECTIFIERS

REVERSE VOLTAGE - 50 to 600 Volts
FORWARD CURRENT - 4.0 Amperes

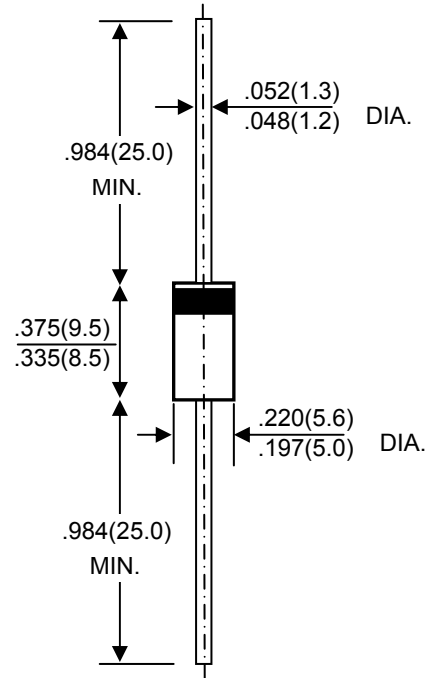
FEATURES

- Super fast switching time for high efficiency
- Low forward voltage drop
High current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- Case: JEDEC DO-27 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.04 ounces , 1.1 grams
- Mounting position: Any

DO-27



Dimensions in inches and (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 Recurrent 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 °C	I _(AV)	4.0							A	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I _{FSM}	125							A	
Peak Forward Voltage at 4.0A DC	V _F	0.95			1.3		1.7		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C @T _J =100°C	I _R	5.0 100							μA	
Maximum Reverse Recovery Time(Note 1)	T _{rr}	35							nS	
Typical Junction Capacitance (Note2)	C _J	80				60				pF
Typical Thermal Resistance (Note3)	R _{θJA}	15							°C/W	
Operating Temperature Range	T _J	-55 to +150							°C	
Storage Temperature Range	T _{STG}	-55 to +150							°C	

NOTES: 1. Measured with I_F=0.5A, I_R=1A, I_{RR}=0.25A.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

3. Thermal resistance junction to ambient,

FIG. 1 – FORWARD CURRENT DERATING CURVE

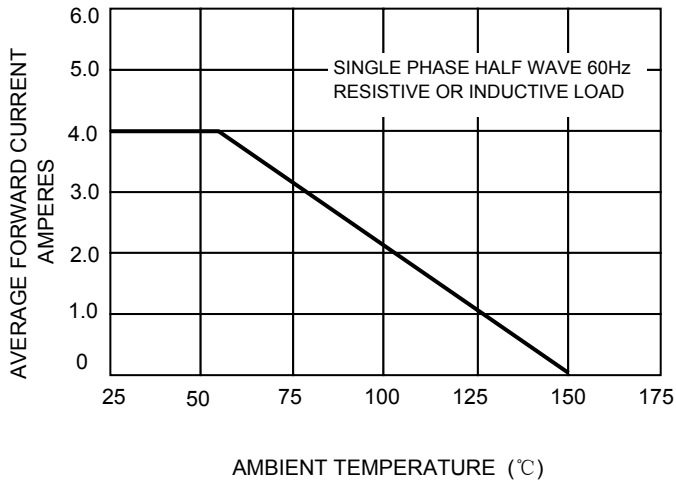


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

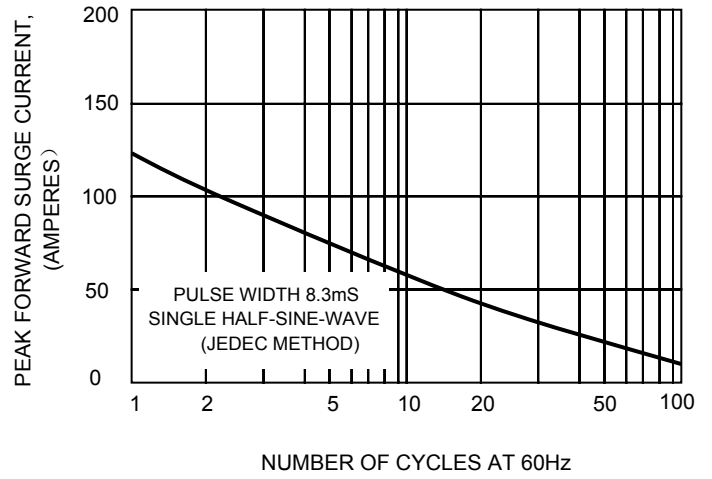


FIG.3 – TYPICAL JUNCTION CAPACITANCE

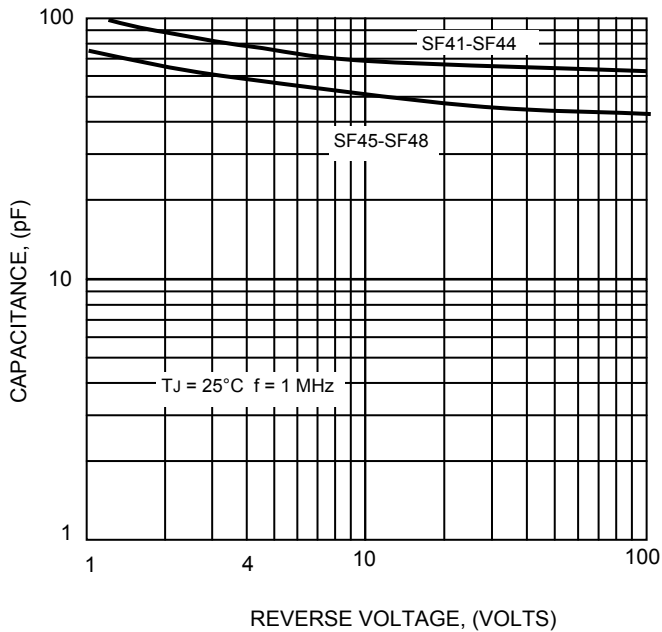


FIG.4-TYPICAL FORWARD CHARACTERISTICS

