



SF41 thru SF49

Glass Passivated Super Fast Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 4.0 Amperes

Features

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



DO-201AD

Mechanical Data

- ◆ Case: JEDEC DO-201AD molded plastic
- ◆ Polarity: Color band denotes cathode
- ◆ Weight: 0.04 ounce, 1.1 grams
- ◆ Mounting position: Any



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Parameter	Symbols	SF41	SF42	SF43	SF44	SF45	SF46	SF47	SF48	SF49	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	800	1000	Volts	
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	560	700	Volts	
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	800	1000	Volts	
Maximum average forward rectified current @ $T_A=55^\circ\text{C}$	$I_{(AV)}$	4.0									Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0									Amps	
Maximum forward Voltage at 4.0A DC	V_F	0.95			1.25		1.3	1.7			Volts	
Maximum DC reverse current at rated DC blocking voltage @ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$	I_R					5.0			100			μA μA
Maximum reverse recovery time (Note 1)	t_{rr}	35			40		50				nS	
Typical junction capacitance (Note 2)	C_J	80						60			pF	
Typical thermal resistance (Note 3)	$R_{\theta JA}$	15									$^\circ\text{C/W}$	
Operating junction temperature range	T_J	-55 to +150									$^\circ\text{C}$	
Storage temperature range	T_{STG}	-55 to +150									$^\circ\text{C}$	

- Notes:**
1. Measured with $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Thermal Resistance Junction to Ambient.

RATINGS AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

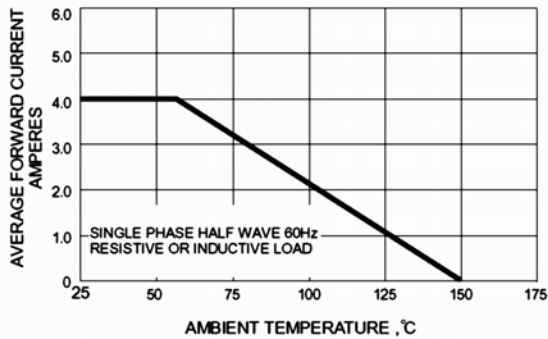


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

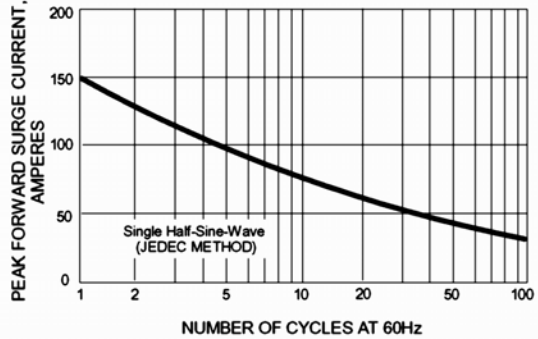


FIG.3 - TYPICAL JUNCTION CAPACITANCE

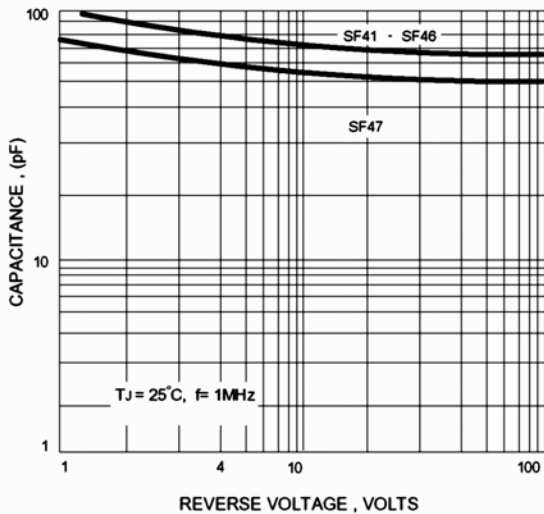


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

