



SF51 thru SF59

Glass Passivated Super Fast Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 5.0 Amperes

Features

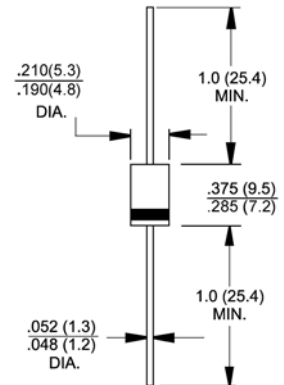
- ◆ Glass passivated chip
- ◆ Super fast switching time for high efficiency
- ◆ Low forward voltage drop and high current capability
- ◆ Low reverse leakage current
- ◆ Plastic material has UL flammability classification 94V-0



DO-201AD

Mechanical Data

- ◆ Case: JEDEC DO-201AD molded plastic
- ◆ Polarity: Color band denotes cathode
- ◆ Weight: 0.042 ounce, 1.195 grams
- ◆ Mounting position: Any



Dimensions in inches and (millimeters)

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	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58	SF59	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°C	I _(AV)	5.0									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 5.0A DC	V _F	0.95				1.25		1.3	1.7		Volts
Maximum DC reverse current at rated DC blocking voltage @ T _J =25°C @ T _J =100°C	I _R	5.0 300									µA µA
Maximum reverse recovery time (Note 1)	t _{rr}	35									nS
Typical junction capacitance (Note 2)	C _J	80						60			pF
Typical thermal resistance (Note 3)	R _{θJA}	13									°C/W
Operating junction temperature range	T _J	-55 to +150									°C
Storage temperature range	T _{STG}	-55 to +150									°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

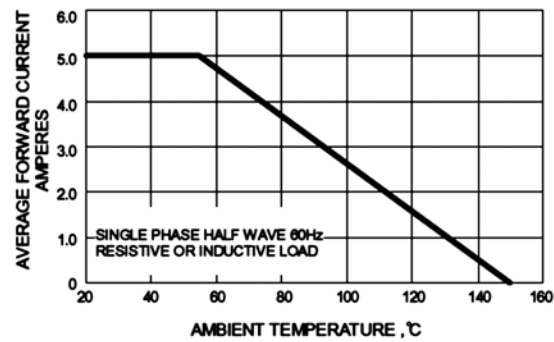


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

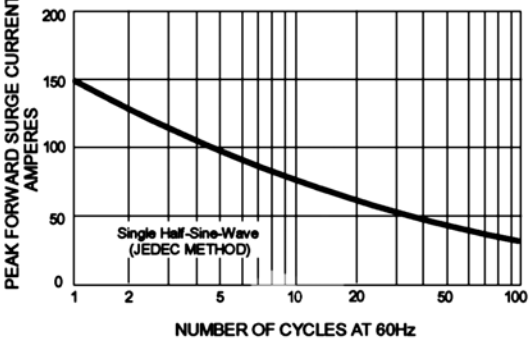


FIG.3 - TYPICAL JUNCTION CAPACITANCE

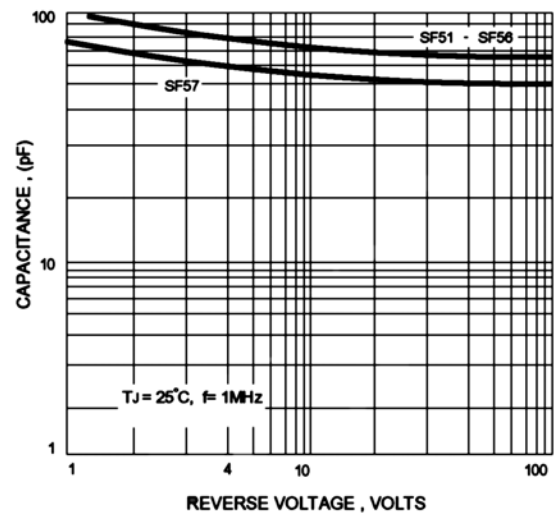


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

