SEMICONDUCTOR

SF51 THRU SF58

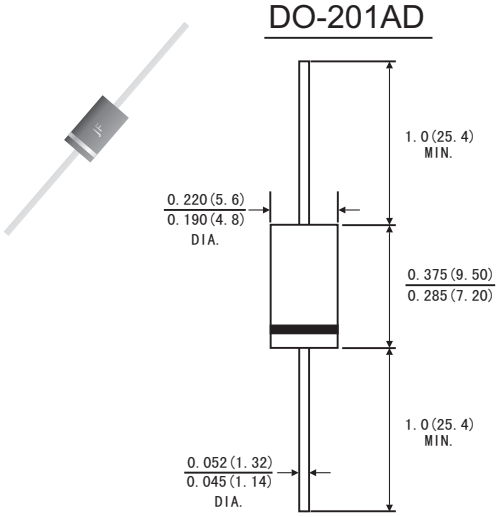
SUPER FAST RECTIFIER

Reverse Voltage: 50 to 600 Volts
Forward Current:5.0Amperes

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Good for switching mode application
- Lead (Pb)-free component
- Component in accordance to RoHS 2011/65/EU
- High temperature soldering guaranteed:260°C/10 seconds at terminals

DO-201AD



Dimensions in inches and (millimetrers)

MECHANICAL DATA

- Case: JEDEC DO-201AD molded plastic body
- TerMINals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.041ounce, 1.15 grams

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%.)

	Symbols	SF 51	SF 52	SF 53	SF 54	SF 55	SF 56	SF 58	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current 0.375'' (9.5mm) Lead Length	$I_{(AV)}$	5.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150							Amps
Maximum Instantaneous Forward Voltage at 5.0 A	V_F	0.95				1.3		1.7	Volts
Maximum DC Reverse Current At Rated DC Blocking Voltage T_A=25°C	I_R	5.0							μA
Maximum DC Reverse Current At Rated DC Blocking Voltage T_A=100°C	I_R	50							μA
Maximum Reverse Recovery Time(Note1)	Trr	35							ns
Typical Junction Capacitance(Note2)	Cj	50							pF
Typical Thermal Resistance (Note3)	$R_{\theta JA}$	20							℃/W
Operating Temperature Range	T_J	-55 to+125							℃
Storage Temperature Range	T_{STG}	-55 to+150							℃

Note: 1.Reverse Recovery Test conditions: I_F=0.5A,I_R=1.0A,I_{RR}=0.25A.

2.Measured at 1MHz and applied reverse voltage of 4.0 Volts.

RATINGS AND CHARACTERISTIC CURVES SF51 THRU SF58

FIG.1-MAXIMUM AVERAGE FORWARD CURRENT DERATING

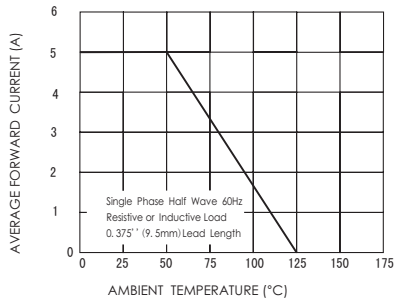


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

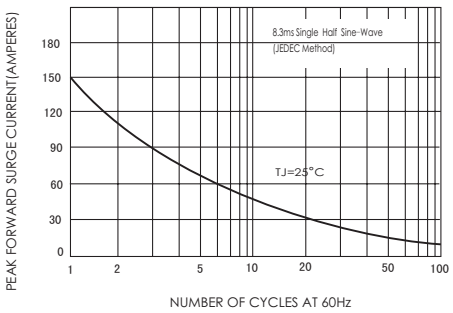


FIG.3-TYPICAL FORWARD CHARACTERISTICS

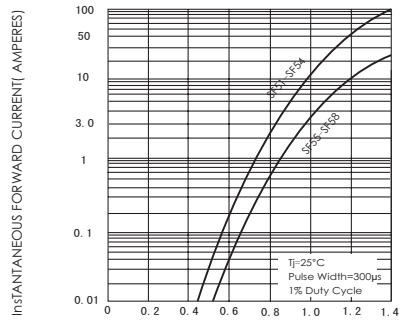


FIG.4-TYPICAL REVERSE CHARACTERISTICS

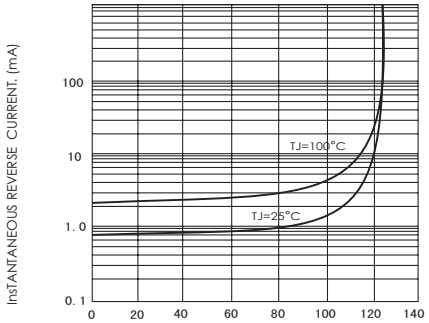


FIG.5-TYPICAL JUNCTION CAPACITANCE