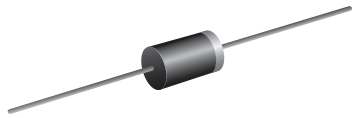
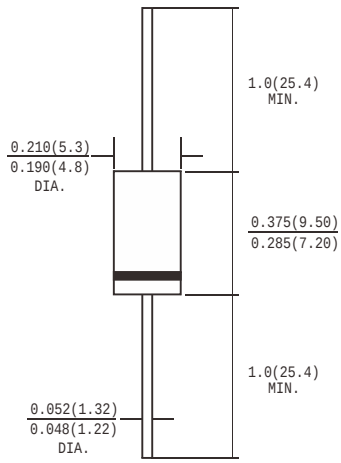
SF51 - SF58

SUPER FAST RECOVERY RECTIFIER DIODES

VOLTAGE RANGE: 50 - 600V
CURRENT: 5.0 A



DO-201AD



Dimensions in inches and (millimetrers)

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 2002/95/EC and WEEE 2002/96/EC
- High temperature soldering guaranteed:260˚C/10 seconds at terminals

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

RoHS COMPLIANT

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	SF51	SF52	SF54	SF55	SF56	SF58	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	Volts
Maximum Average Forward Rectified Current 0.375''(9.5mm)Lead Length at 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						Amps
Maximum Instantaneous Forward Voltage at 5.0 A	V_F	0.95			1.25		1.70	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	-65 to +150						℃
Storage Temperature Range	T_{STG}	-65 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.

FIG.1-MAXIMUM AVERAGE FORWARD CURRENT DERATING

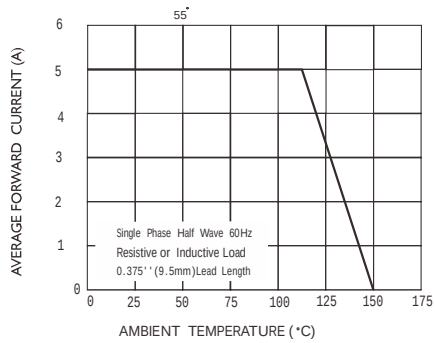


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

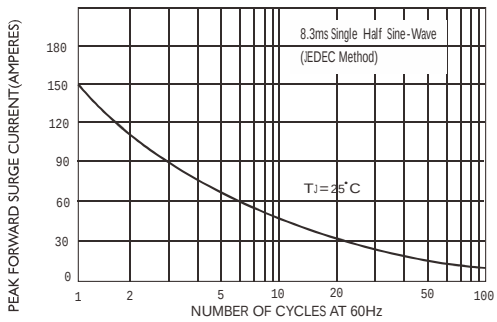


FIG.3-TYPICAL FORWARD CHARACTERISTICS

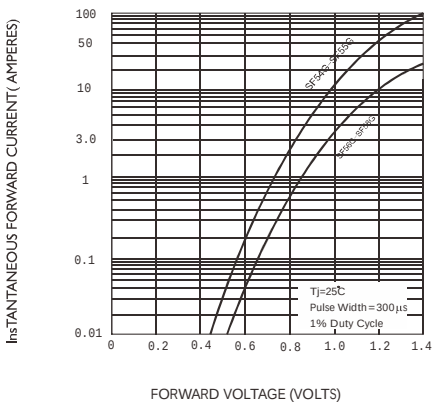


FIG.4-TYPICAL REVERSE CHARACTERISTICS

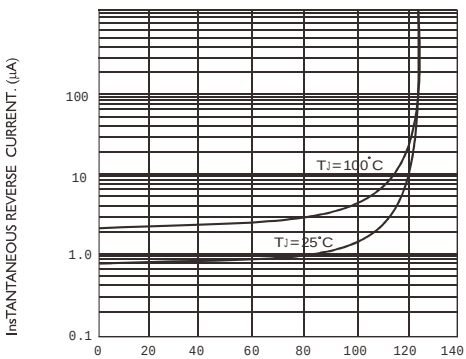


FIG.5-TYPICAL JUNCTION CAPACITANCE

