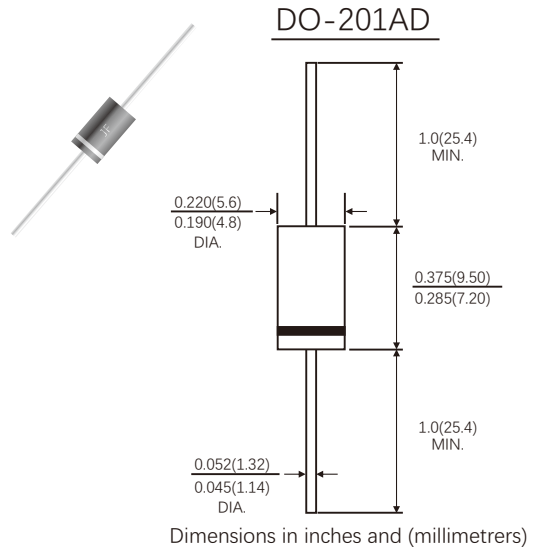


FEATURES

- 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 2015/863/EU
- 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: 0.041 ounce, 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%.)

Parameters	Symbols	SF 51G	SF 52G	SF 53G	SF 54G	SF 55G	SF 56G	SF 58G	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	$I_{F(AV)}$	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	$T_A=25^{\circ}C$	5.0						50		μA
	$T_A=100^{\circ}C$									
Maximum Reverse Recovery Time(Note1)	t_{rr}	35							ns	
Typical Junction Capacitance(Note2)	C_j	50							pF	
Typical Thermal Resistance(Note3)	$R_{\theta JL}$	6.0							$^{\circ}C/W$	
Operating Temperature Range	T_J	-55 to +150							$^{\circ}C$	
Storage Temperature Range	T_{STG}	-55 to +150							$^{\circ}C$	

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 OF SF51G THRU SF58G

FIG.1-MAXIMUM AVERAGE FORWARD CURRENT DERATING

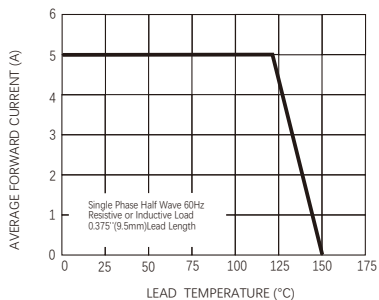


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

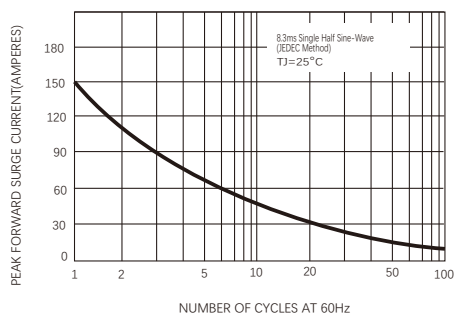


FIG.3-TYPICAL FORWARD CHARACTERISTICS

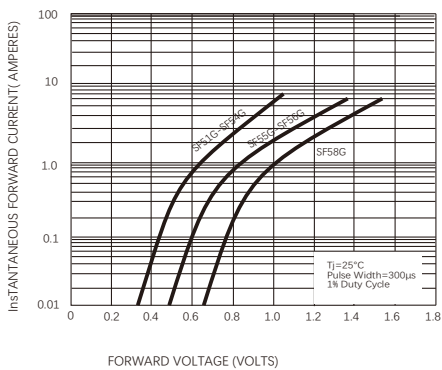


FIG.4-TYPICAL REVERSE CHARACTERISTICS

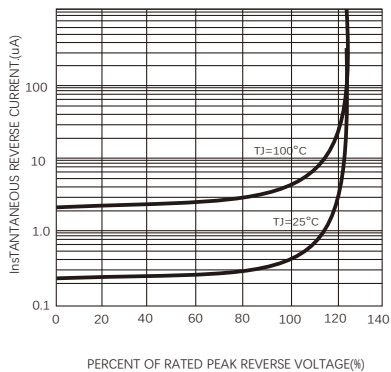
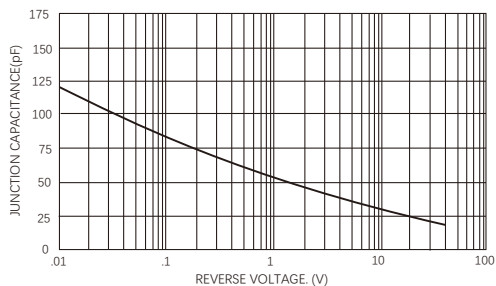


FIG.5-TYPICAL JUNCTION CAPACITANCE



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