

III. Fast / Ultra Fast / Super Fast Recovery Rectifier

**5.0A Super Fast Recovery Rectifier
SF51~SF58**

(Package: DO-201AD)

<p>FEATURES</p> <ul style="list-style-type: none"> • The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 • Super fast switching for high efficiency • Low reverse leakage • High forward surge current capability • High temperature soldering guaranteed: 250 /10 seconds, 0.375”(9.5mm) lead length, 5 lbs. (2.3 kg) tension <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • 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 : 0.04 ounce, 1.10 grams 	<p>Case: DO-201AD Dimensions in inches and (millimeters)</p>
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Ratings & Electrical Characteristics

Characteristic	Symbol	SF51	SF52	SF53	SF54	SF55	SF56	SF58	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 at $T_a = 55$	I_O	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 instantaneous forward voltage at 5.0A	V_F	0.97			1.30		1.70		Volts
Maximum DC reverse current at rated DC blocking voltage $T_a = 25$ $T_a = 100$	I_R	10.0 300.0							μA
Maximum reverse recovery time (Note 1)	T_{rr}	35							ns
Typical junction capacitance (Note 2)	C_j	100.0			50.0				PF
Typical thermal resistance (Note 3)	R_{th-JA}	30.0							/ W
Operating junction and storage temperature range	T_j, T_{stg}	-65 to + 150							

Note :
 1. Reverse recovery conditions: $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts DC
 3. Thermal resistance from junction to ambient at 0.375” (9.5mm) lead length, P.C.B. mounted

Ratings and Characteristic Curves of SF51~SF58

