

SF31G THRU SF38G

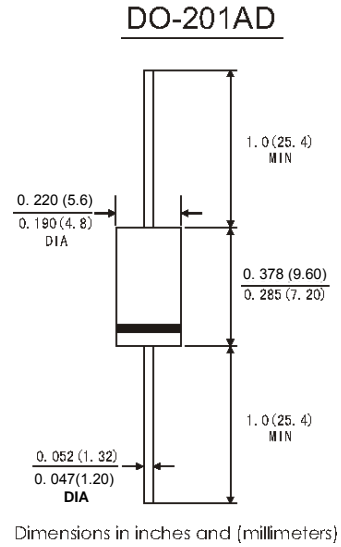
Glass Passivated Super Fast Rectifiers
Reverse Voltage - 50 to 600 V
Forward Current - 3 A

Features

- Low power loss
- Low forward voltage
- High current capability
- High reliability
- High surge current capability

Mechanical Data

- **Case:** JEDEC DO-201AD molded plastic body
- **Terminals:** Axial lead, solderable per MIL-STD-202, Method 208
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any



Absolute Maximum Ratings and Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single-phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF37G	SF38G	Units
	Marking	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF37G	SF38G	-
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3								A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	100								A
Maximum Instantaneous Forward Voltage at 3 A	V_F	0.95			1.25		1.7			V
Maximum Reverse Current $T_J = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J = 125^\circ\text{C}$	I_R	5				100				μA
Maximum Reverse Recovery Time ¹⁾	t_{rr}	35								ns
Typical Junction Capacitance ²⁾	C_J	80				60				pF
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$	35				9				$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	- 55 to + 150								$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150								$^\circ\text{C}$

¹⁾ Reverse recovery test conditions: $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{RR} = 0.25 \text{ A}$.

²⁾ Measured at 1 MHz and applied reverse voltage of 4 V.

TOP DYNAMIC



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FIG. 1 FORWARD CURRENT DERATING CURVE

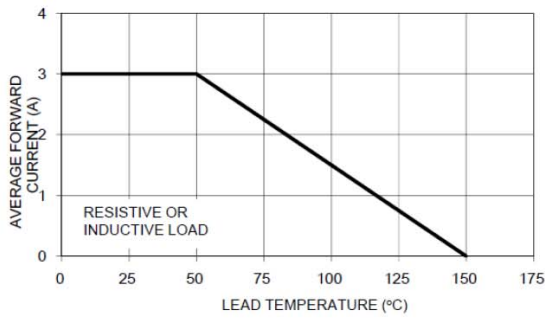


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

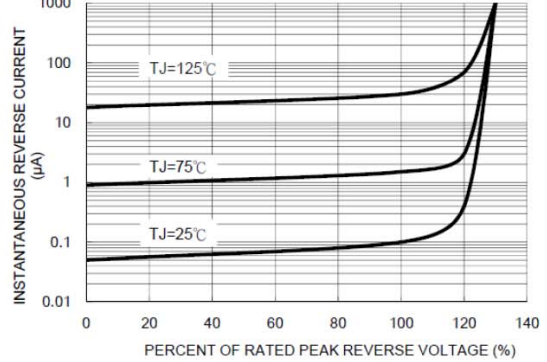


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FIG. 4 TYPICAL FORWARD CHARACTERISTICS

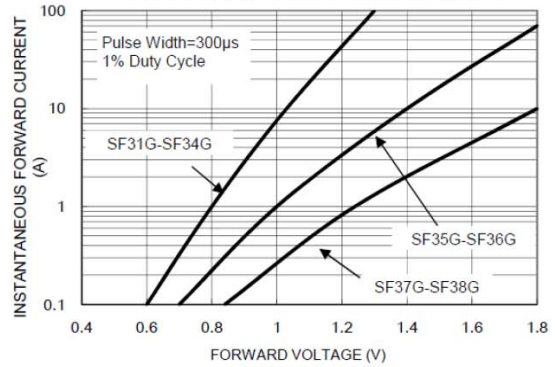
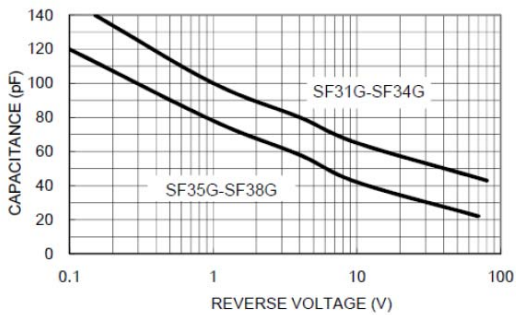


FIG. 5 TYPICAL JUNCTION CAPACITANCE



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