

SF31G THRU SF38G

Glass Passivated Super Fast Rectifiers

Reverse Voltage - 50 to 600 V

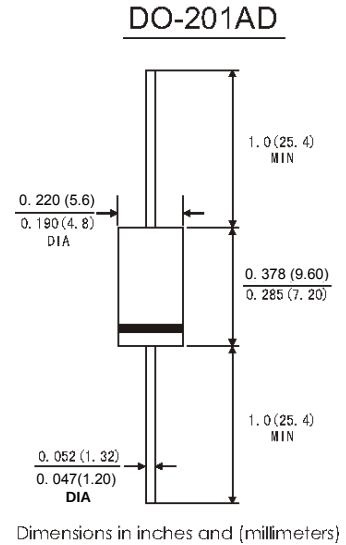
Forward Current - 3 A

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

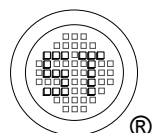
Rating at 25°C ambient temperature unless otherwise specified. Single-phase, half wave, 60 Hz, resistive or inductive load.

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°C at Rated DC Blocking Voltage T _J = 125°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 _{θJA} R _{θJC}	35 9								°C/W
Operating Junction Temperature Range	T _j	- 55 to + 150								°C
Storage Temperature Range	T _{stg}	- 55 to + 150								°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.



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FIG.1 FORWARD CURRENT DERATING CURVE

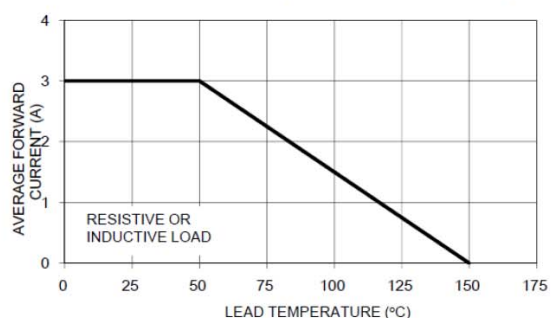


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

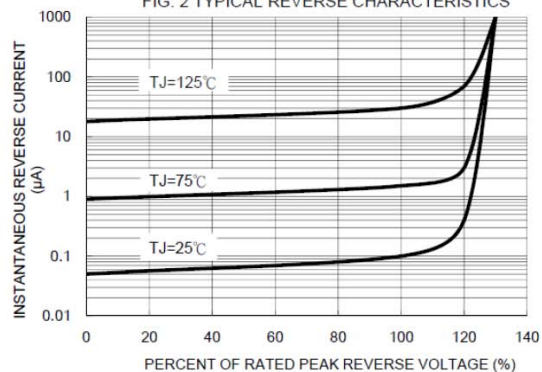


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

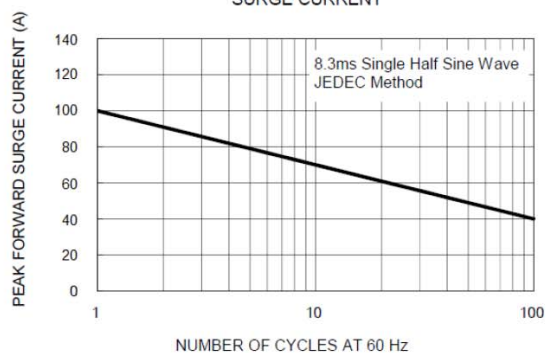


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

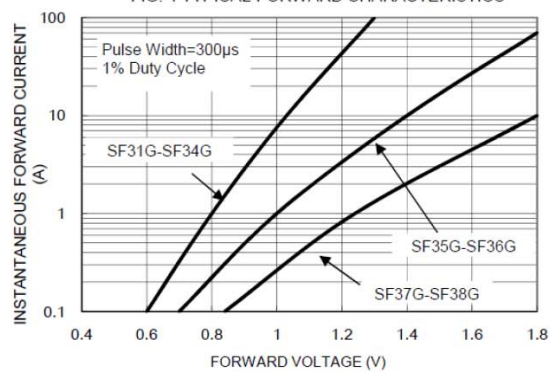


FIG. 5 TYPICAL JUNCTION CAPACITANCE

