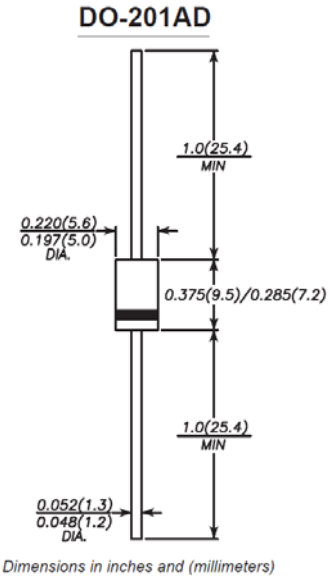
SF31G THRU SF38G

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



Dimensions in inches and (millimeters)

Features
- Low power loss
- Low forward voltage
- High current capabilit
- Higu 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℃ 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}	125								A
Maximum Instantaneous Forward Voltage at 3 A	V_F	0.95				1.25		1.7		V
Maximum Reverse Current T_A = 25℃ at Rated DC Blocking Voltage T_A = 100℃	I_R	10 100								μA
Maximum Reverse Recovery Time [1]	t_{rr}	35								ns
Typical Junction Capacitance [2]	C_J	80				60				pF
Typical Thermal Resistance [3]	$R_{\theta JA}$	30								℃/W
Operating Junction Temperature Range	T_j	- 55 to + 150								℃
Storage Temperature Range	T_{stg}	- 55 to + 150								℃

[1] Reverse recovery condition I_F = 0.5 A,I_R = 1.0 A,Irr = 0.25 A.

[2] Measured at 1MHz and applied reverse voltage of 4.0V D.C.

[3] Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length,P.C.B. mounted.

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Electrical characteristic curves

FIG. 1- FORWARD CURRENT DERATING CURVE

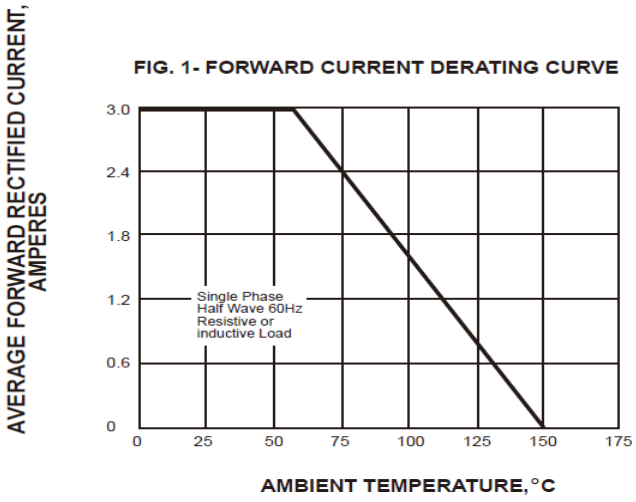


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

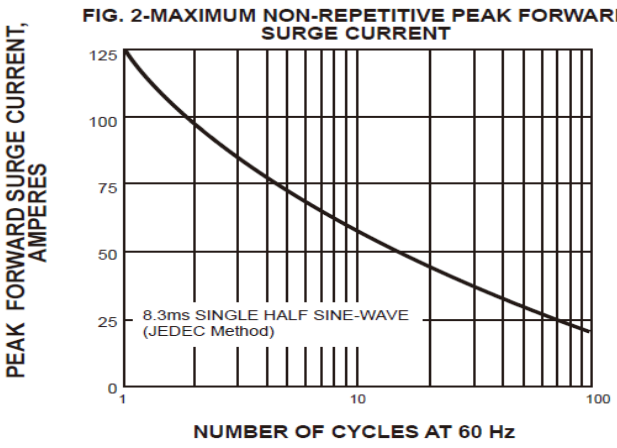


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

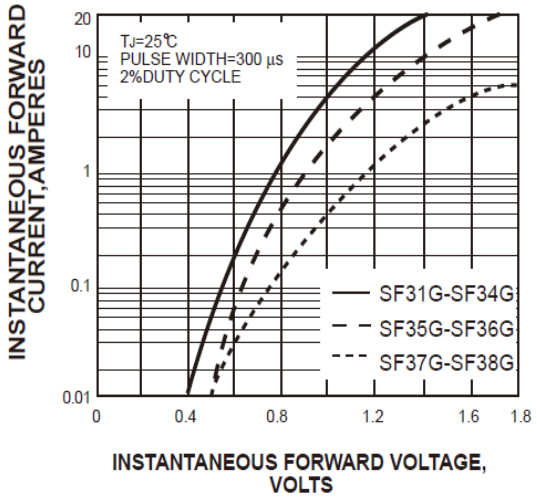


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

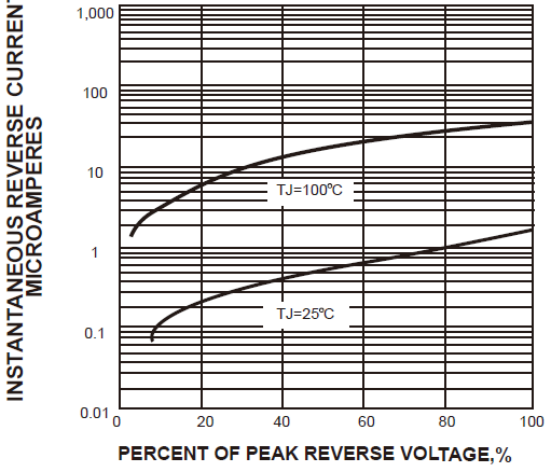


FIG. 5-TYPICAL JUNCTION CAPACITANCE

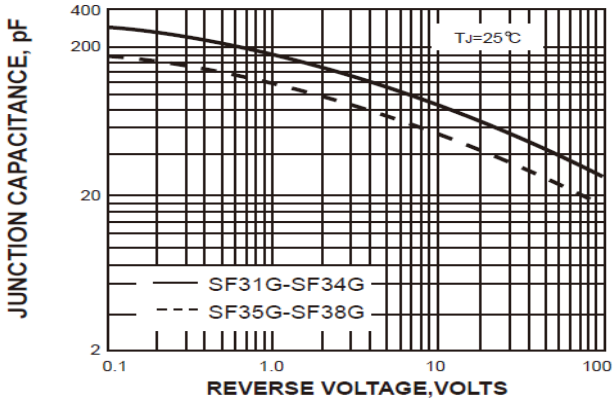
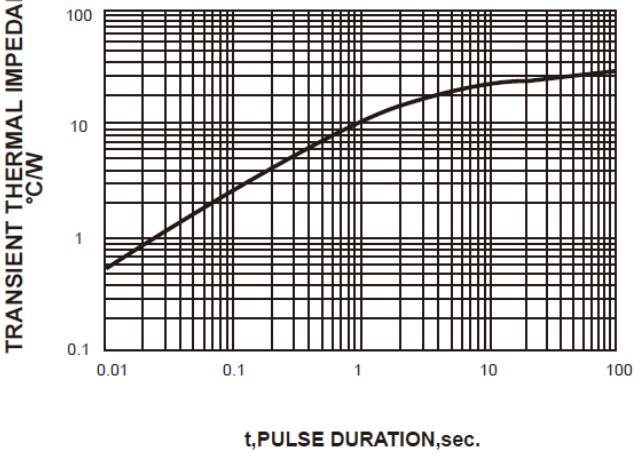


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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