



SF51G ~ SF58G

SUPER FAST GLASS PASSIVATED RECTIFIER

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Super fast speed switching for high efficiency
- Glass passivated Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
250°C/10 seconds at terminals

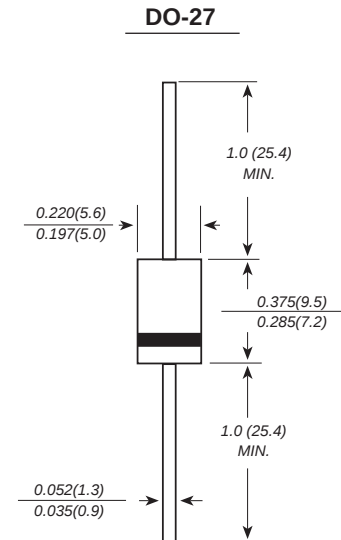
Mechanical Data

Case: JEDEC DO-27 molded plastic body

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

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

	SYMBOLS	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF58G	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 at T _L =55°C	I _(AV)	5.0							Amp
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 5.0A	V _F	0.95				1.3		1.7	Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5.0 50.0							u A
Maximum reverse recovery time (Note 1)	T _{rr}	35							ns
Typical junction capacitance (Note 2)	C _J	100				50			pF
Typical thermal resistance (Note 3)	R _{qJA}	30							°C/W
Operating junction and storage temperature range	T _J ,T _{STG}	-50 to +155							°C

Note: 1. Reverse recovery time test condition: $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{rr}=0.25\text{A}$

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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FIG. 1- FORWARD CURRENT DERATING CURVE

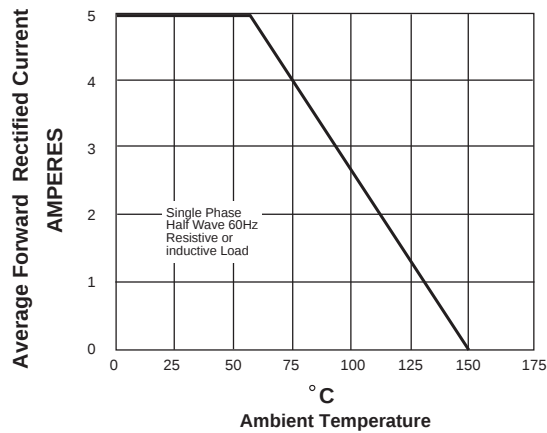


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

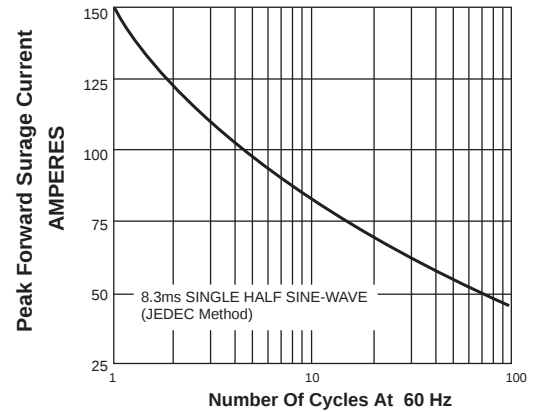


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

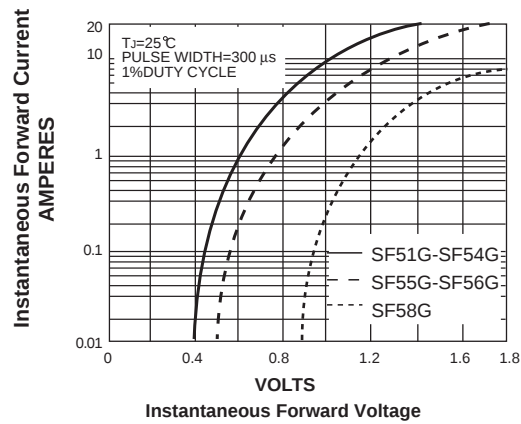


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

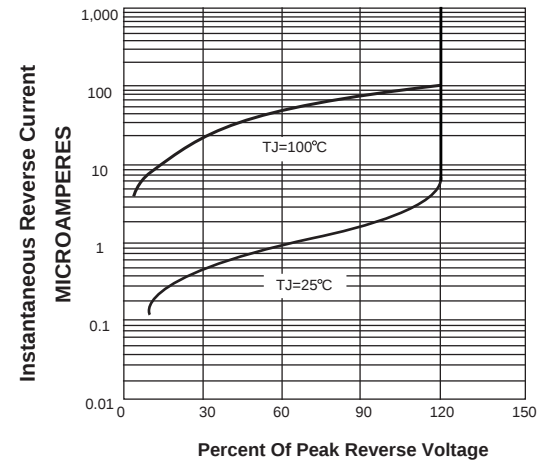


FIG. 5-TYPICAL JUNCTION CAPACITANCE

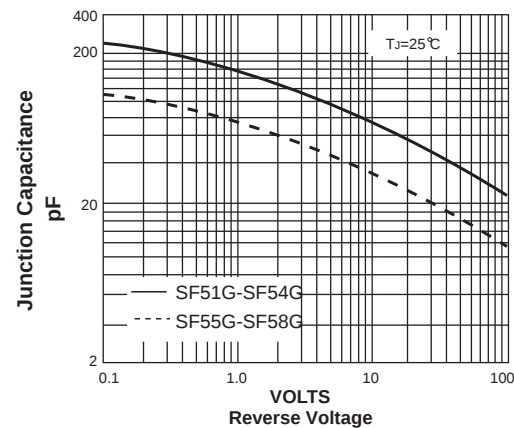


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

