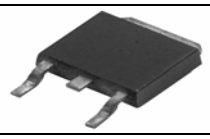
Preliminary

SFAD301G THRU **SFAD308G**

3.0 AMPS. Glass Passivated Super Fast Rectifiers



Voltage Range
50 to 600 Volts
Current
3.0 Amperes

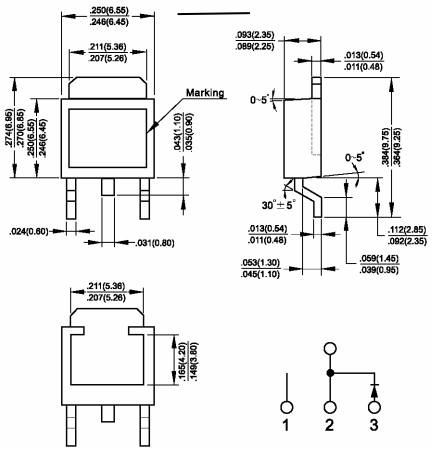
Features

- ✧ Ultrafast Recovery
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

Mechanical Data

- ✧ Case: Epoxy molded
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Terminals: Leads solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds.
- ✧ Weight: 0.4 grams

DPAK



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

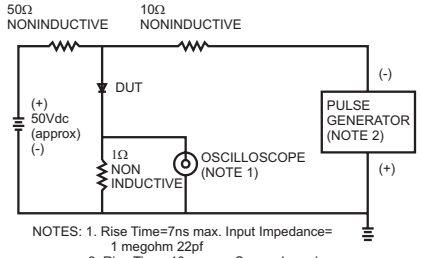
Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	SFAD 301G	SFAD 302G	SFAD 303G	SFAD 304G	SFAD 305G	SFAD 306G	SFAD 307G	SFAD 308G	Units
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 @T_C = 137℃	$I_{(AV)}$	3.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	55								A
Maximum Instantaneous Forward Voltage @3.0A	V_F	1.1				1.3		1.7		V
Maximum DC Reverse Current @ T_A=25℃ at Rated DC Blocking Voltage @ T_A=100℃	I_R	5.0 100								μA μA
Maximum Reverse Recovery Time (Note 1)	Trr	35								nS
Typical Thermal Resistance (Note3)	RθJC	10								℃/W
Typical Junction Capacitance (Note 2)	Cj	80				60				pF
Operating Temperature Range	T_J	-65 to +150								℃
Storage Temperature Range	TSTG	-65 to +150								℃

Notes: 1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
3. Thermal Resistance from Junction to Case.

RATINGS AND CHARACTERISTIC CURVES (SFAD301G THRU SFAD308G)

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=
1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance=
50 ohms

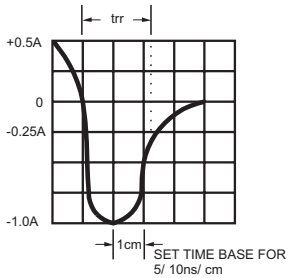


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

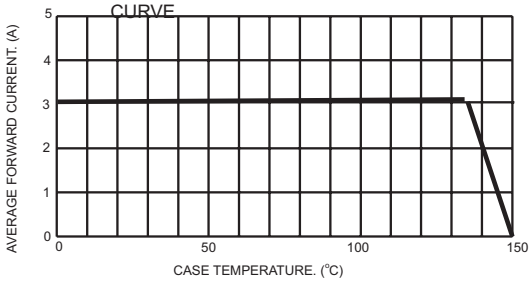


FIG.3- TYPICAL REVERSE CHARACTERISTICS

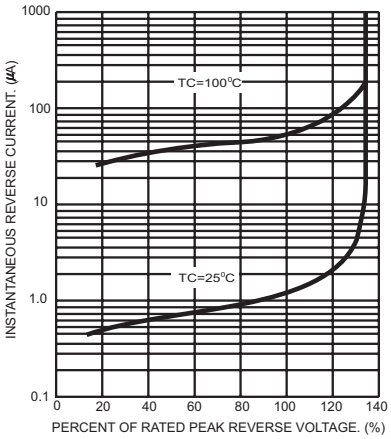


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

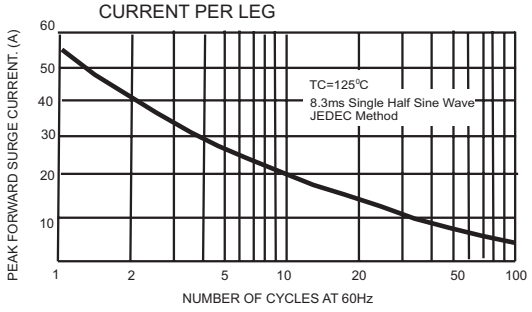


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

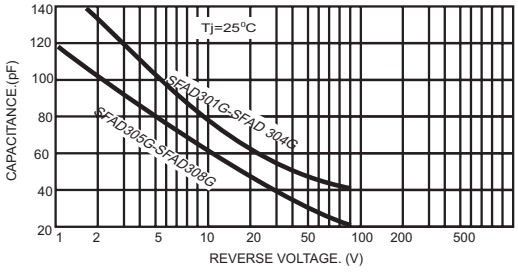


FIG.6- TYPICAL FORWARD CHARACTERISTICS PER LEG

