Pb Free Plating Product

SF54AG thru SF58AG

5.0 Ampere Super Fast Rectifiers for Power Chargers

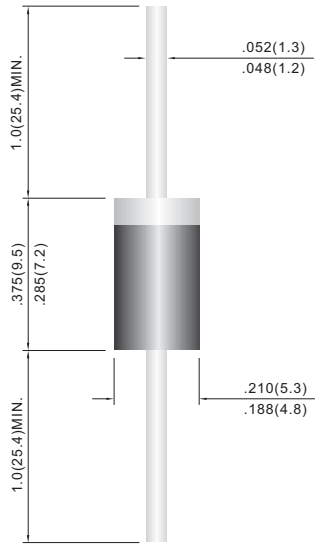
Features

- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ GPP as-cut wafer for high IFSM
- ✧ High surge current capability
- ✧ Low power loss.
- ✧ For use in low voltage, high frequency inventor, free wheeling, and polarity protection application

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375",(9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Mounting position: Any
- ✧ Weight: 1.2 gram approximately

DO-201AD Unit: inch(mm)



Maximum Ratings and Electrical 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%

Type Number	Symbol	SF54AG	SF56AG	SF58AG	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @T_A =100°C	$I_{(AV)}$	5.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	170			A
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	0.98	1.3	1.7	V
Maximum DC Reverse Current @ T_A=25°C at Rated DC Blocking Voltage @ T_A=125°C	I_R	5.0 100			uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	35			nS
Typical Junction Capacitance (Note 2)	Cj	100	50		pF
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	40 5.0			°C/W
Operating Temperature Range	T_J	-65 to +150			°C
Storage Temperature Range	T_{STG}	-65 to +150			°C

Notes:
1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
3. Mount on Cu-Pad Size 16mm x 16mm on PCB.

RATING AND CHARACTERISTIC CURVES

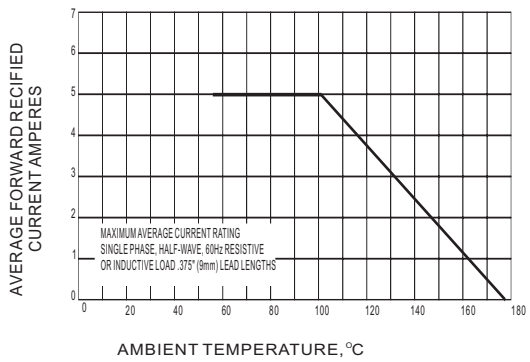


FIG.1 MAXIMUM AVERAGE FORWARD CURRENT RATING

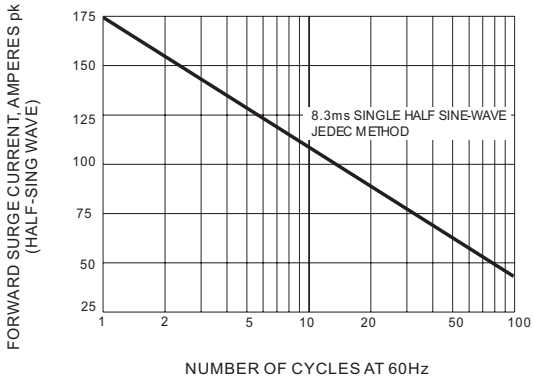


FIG.2 MAXIMUM NON-REPEITIVE SURGE CURRENT

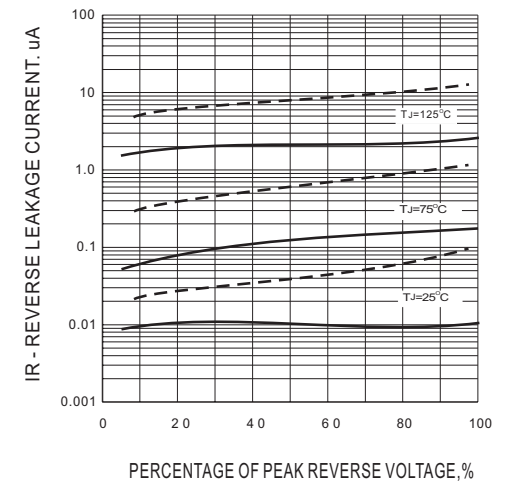


FIG.3 TYPICAL REVERSE CHARACTERISTICS

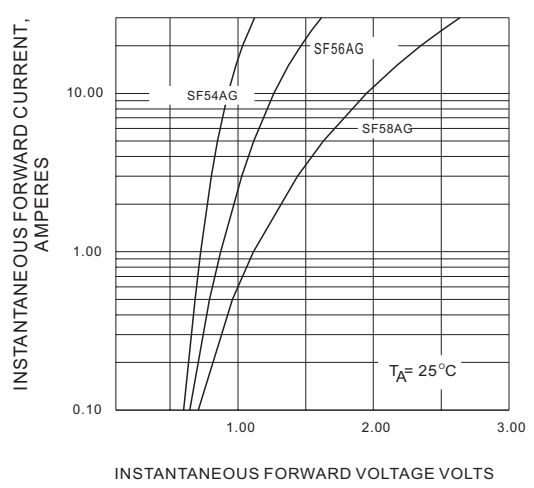


FIG.4 TYPICAL JUNCTION CAPACITANCE