



Pb Free Plating Product

SF 304C/SF 306C/SF 307C

30 Ampere Dual Common Cathode Fast Recovery Half Bridge Rectifiers

**Features**

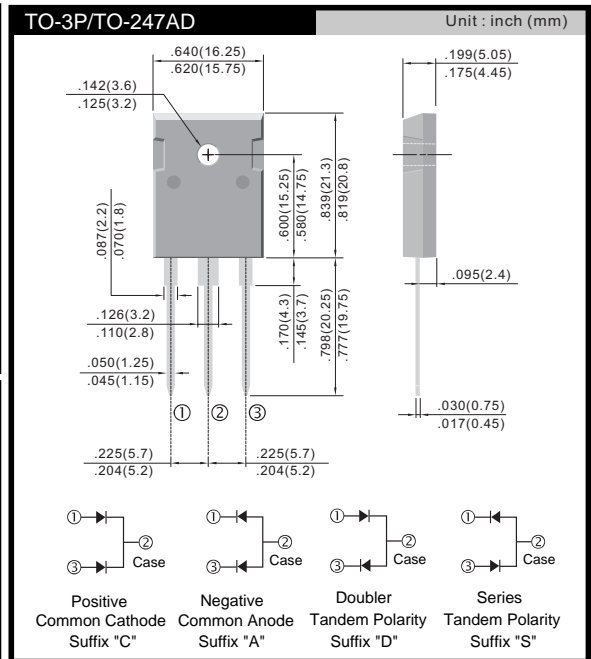
- ★ Latest GPP technology with super fast recovery time
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

**Application**

- ★ Automotive Inverters/Solar Inverters
- ★ Plating Power Supply, SMPS, Adapter and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

**Mechanical Data**

- ★ Case: TO-247AD/TO-3P heatsink
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: As marked on diode body
- ★ Mounting position: Any
- ★ Weight: 5.6 gram approximately



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

|   | SYMBOL   | SF304C      | SF306C | SF307C | UNIT     |
|---|----------|-------------|--------|--------|----------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM     | 200         | 400    | 600    | V        |
| Maximum RMS Voltage   | VRMS     | 140         | 280    | 420    | V        |
| Maximum DC Blocking Voltage   | VDC      | 200         | 400    | 600    | V        |
| Maximum Average Forward Rectified Current Tc=125°C  | IF(AV)   | 30.0        |        |        | A        |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 300         |        |        | A        |
| Maximum Instantaneous Forward Voltage @ 15.0 A  | VF       | 0.98        | 1.3    | 1.7    | V        |
| Maximum DC Reverse Current @Tj=25°C At Rated DC Blocking Voltage @Tj=125°C                        | IR       | 10<br>500   |        |        | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)  | Trr      | 35-50       |        |        | nS       |
| Typical junction Capacitance (Note 2)   | CJ       | 150         |        |        | pF       |
| Operating Junction and Storage Temperature Range  | TJ, TSTG | -55 to +150 |        |        | °C       |

NOTES : (1) Reverse recovery test conditions If = 0.5A Ir = 1.0A Irr = 0.25A.  
 (2) Thermal Resistance junction to terminal.  
 (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

FIG.1 - FORWARD CURRENT DERATING CURVE

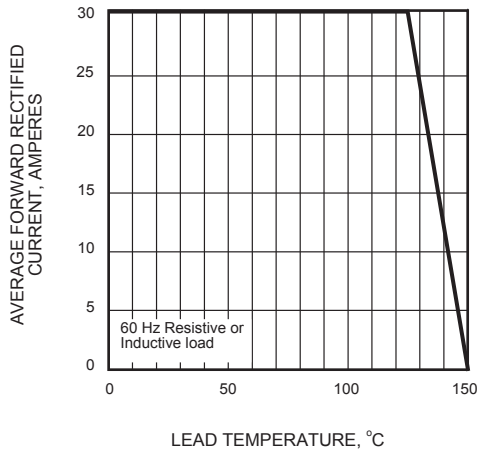


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

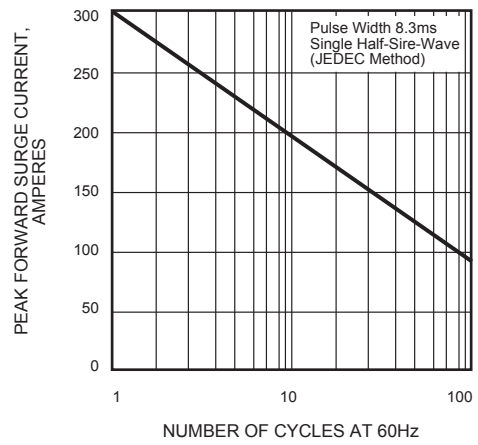


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

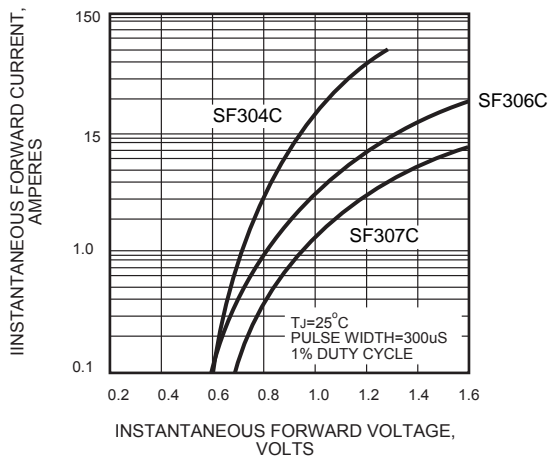


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

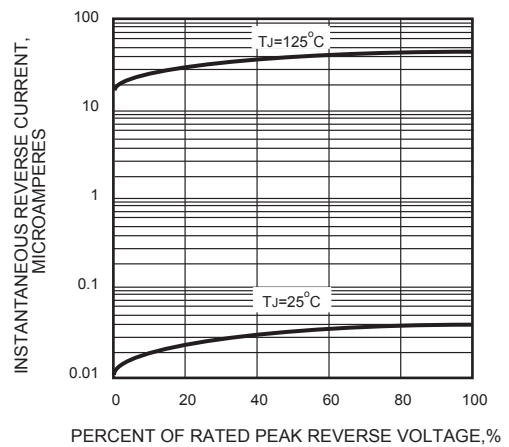


FIG.5 - TYPICAL JUNCTION CAPACITANCE

