

Pb Free Plating Product

URF2020C/URF2040C/URF2060C



20 Ampere Insulated Common Cathode Fast Recovery Half Bridge Rectifiers

Features

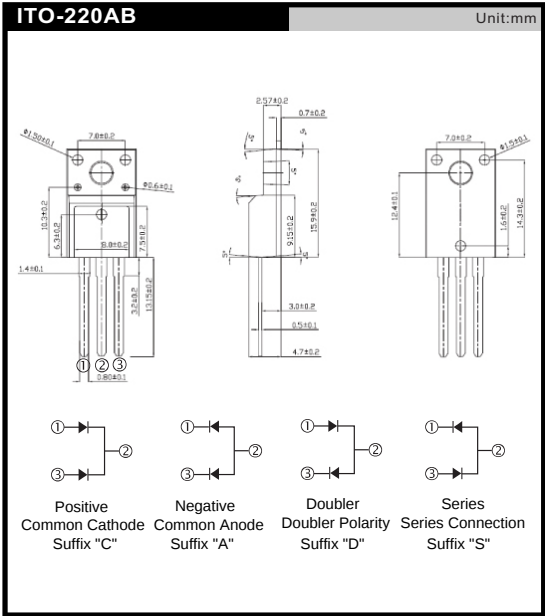
- ★ Latest GPP technology with super fast recovery time
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

Application

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

Mechanical Data

- ★ Case: Fully Isolated Molding TO-220FP
- ★ 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: 2.1 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   | URF2020C    | URF2040C | URF2060C | 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)   | 20.0        |          |          | A        |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 200         | 175      |          | A        |
| Maximum Instantaneous Forward Voltage @ 10.0 A                                                    | VF       | 0.98        | 1.3      | 1.7      | V        |
| Maximum DC Reverse Current @TJ=25°C<br>At Rated DC Blocking Voltage @TJ=125°C                     | IR       | 5.0<br>100  |          |          | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)                                                            | Trr      | 35          |          |          | nS       |
| Typical junction Capacitance (Note 2)                                                             | CJ       | 120         | 70       |          | 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) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

FIG.1 - FORWARD CURRENT DERATING CURVE

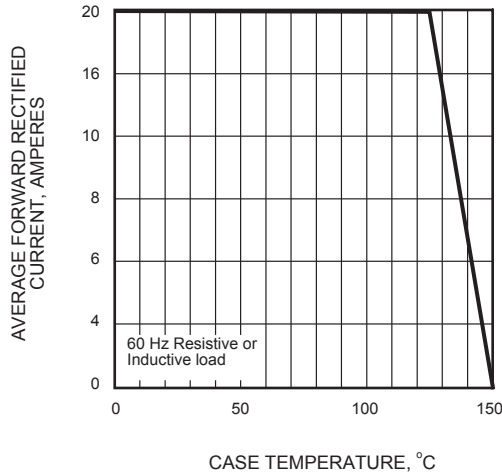


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

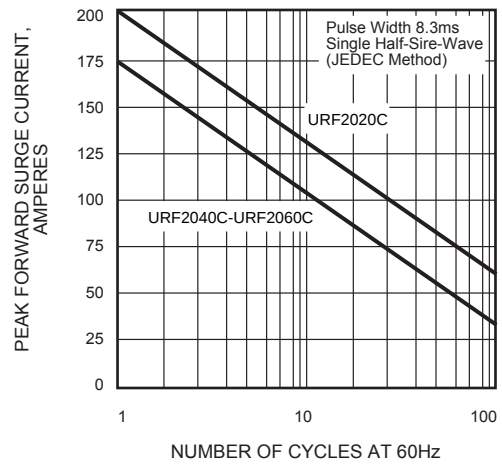


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

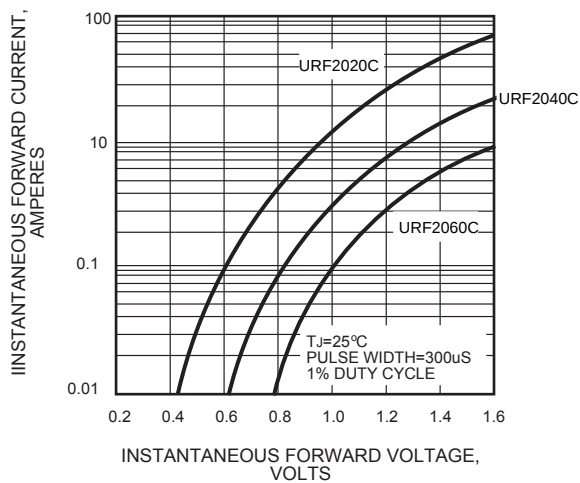


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

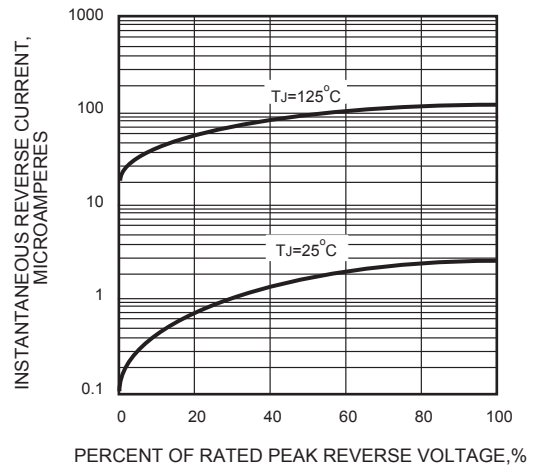


FIG.5 - TYPICAL JUNCTION CAPACITANCE

