

Pb Free Plating Product

FRF1620C/FRF1640C/FRF1660C



16 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

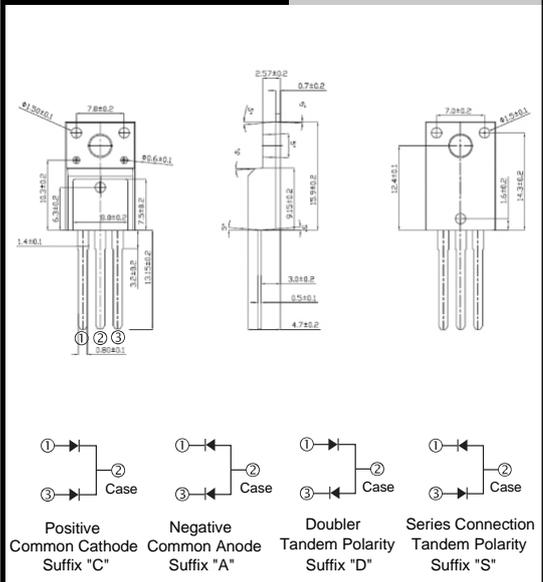
- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS, Motor Control and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

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: 2.0 gram approximately

ITO-220AB

Unit:mm

**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 | FRF1620C | FRF1640C | FRF1660C | 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=100°C | IF(AV) | 16.0 | | | A |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | IFSM | 175 | 150 | | A |
| Maximum Instantaneous Forward Voltage @ 8.0 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 | | 10.0 | | uA |
| | | | 250 | | uA |
| Maximum Reverse Recovery Time (Note 1) | Trr | | 35 | | nS |
| Typical junction Capacitance (Note 2) | CJ | | 90 | | pF |
| Typical Thermal Resistance (Note 3) | RθJC | | 2.2 | | °C/W |
| Operating Junction and Storage Temperature Range | TJ, TSTG | | -55 to + 150 | | °C |

NOTES : (1) Reverse recovery test conditions IF= 0.5A, R= 1.0A, Irr = 0.25A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

(3) Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

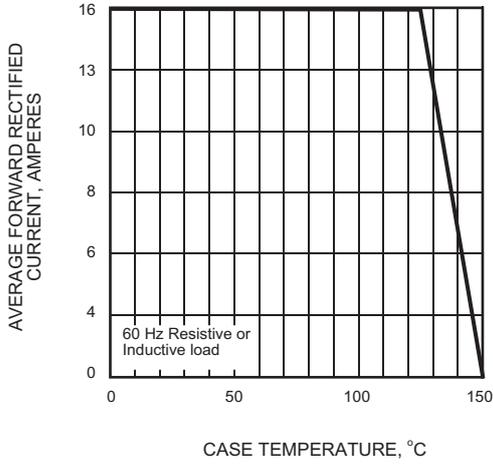


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

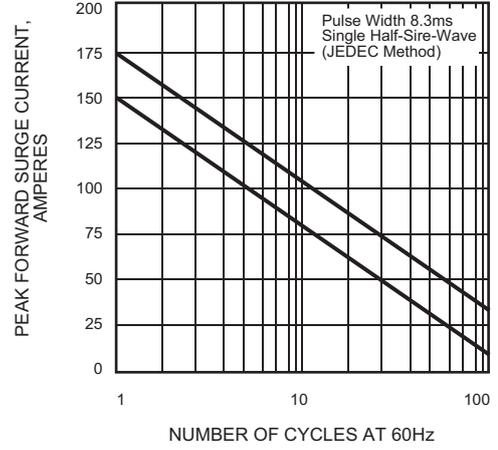


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

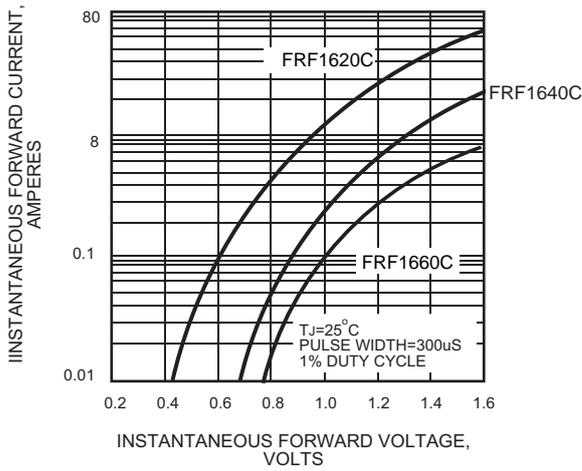


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

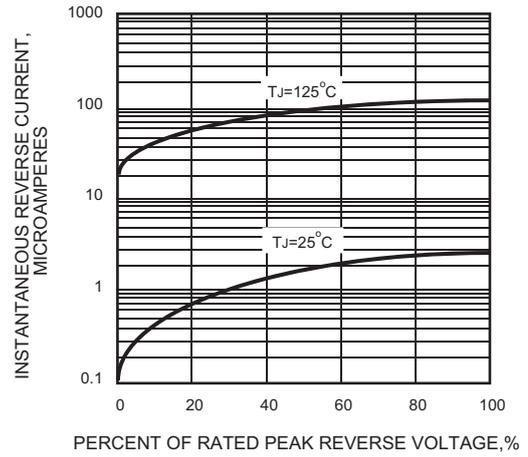


FIG.5 - TYPICAL JUNCTION CAPACITANCE

