



YENYO

# HFR12A06F

Glass Passivated Hyper Fast Recovery Rectifier

## Features

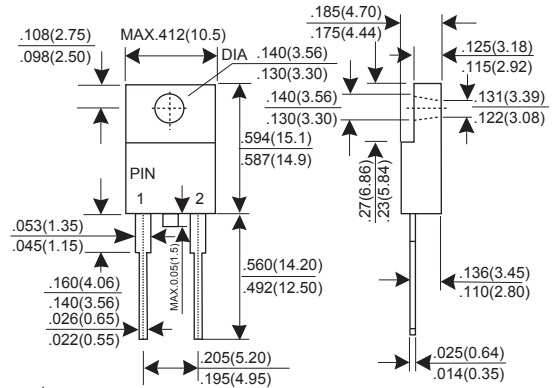
- ★ Fast switching for high efficiency
- ★ Low noise
- ★ Low reverse leakage current
- ★ High voltage super FRD
- ★ PFC application

## Mechanical Data

- ★ Case: Molded plastic ITO-220AC
- ★ Epoxy: UL 94V-0 rate flame retardant ,
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Mounting position: Any
- ★ Weight: 1.73 grams

**Voltage Range 600 V  
Current 12.0 Ampere**

### ITO-220AC



Dimensions in inches and (millimeters)

## 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%.

| CHARACTERISTIC  | SYMBOL   | HFR12A06F |      |      | UNIT |
|---|----------|-----------|------|------|------|
|   |          | Min.      | Typ. | Max. |      |
| Recurrent Peak Reverse Voltage  | VRRM     | -         | -    | 600  | V    |
| RMS Voltage   | VRMS     | -         | -    | 420  | V    |
| DC Blocking Voltage   | VDC      | -         | -    | 600  | V    |
| Average Forward Rectified Current Tc=100°C  | IF(AV)   | -         | -    | 12.0 | A    |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | IFSM     | -         | -    | 110  | A    |
| Instantaneous Forward Voltage @ 12.0 A  | VF       | -         | -    | 2.4  | V    |
| DC Reverse Current @Tj=25°C   | IR       | -         | -    | 10.0 | uA   |
| At Rated DC Blocking Voltage @Tj=150°C  |          | -         | -    | 500  | uA   |
| Maximum Reverse Recovery Time (Note 1)  | Trr      | -         | -    | 25   | nS   |
| Typical junction Capacitance (Note 2)   | CJ       | -         | 70   | -    | pF   |
| Typical Thermal Resistance (Note 3)   | RθJC     | -         | 3.3  | -    | °CW  |
| Operating Junction and Storage Temperature Range  | TJ, TSTG | -65       | -    | 175  | °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.  
(3) Thermal Resistance junction to case.

# RATINGS AND CHARACTERISTIC CURVES HFR12A06F

FIG.1 - FORWARD CURRENT DERATING CURVE

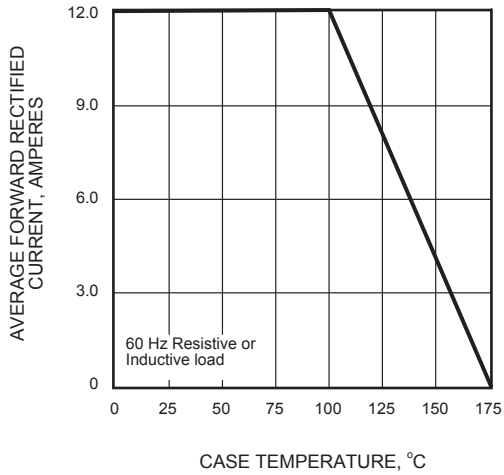


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

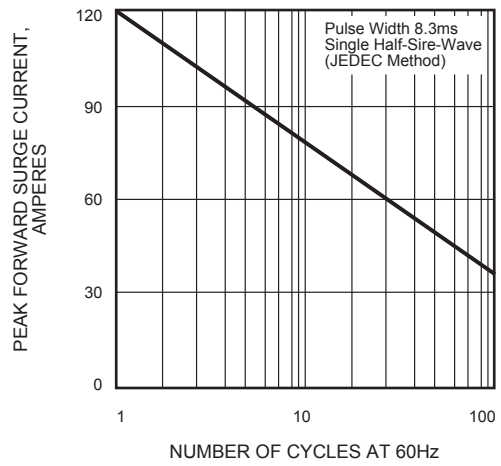


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

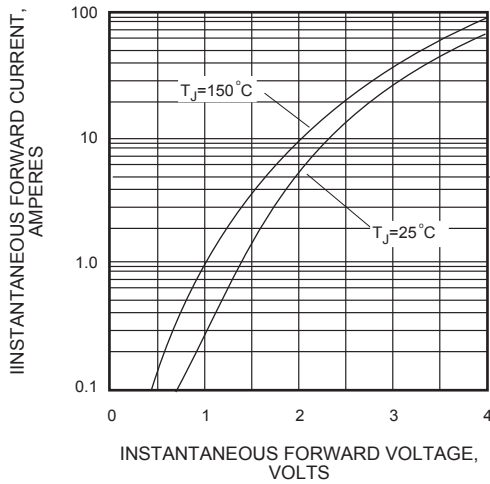


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

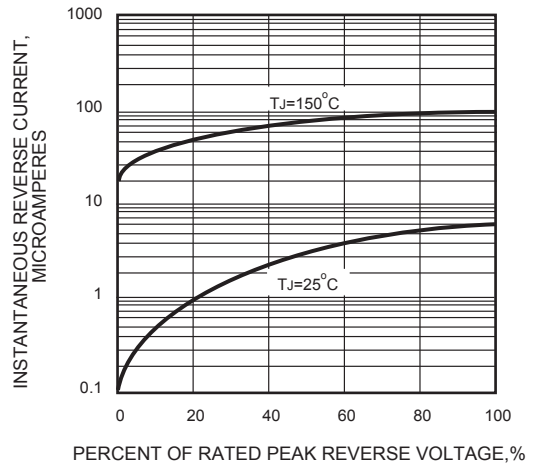


FIG.5 - TYPICAL JUNCTION CAPACITANCE

