



YENYO

# HFR8A12F

Glass Passivated Hyperfast Recovery Rectifier

## Features

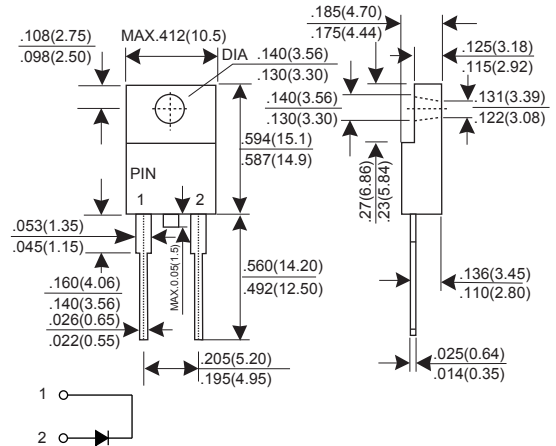
- ★ Fast switching for high efficiency
- ★ Low noise
- ★  $T_{rr} = 35\text{ns}$
- ★ Low reverse leakage current
- ★ High voltage super FRD
- ★ PFC application

## 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 1200 V  
Current 8.0 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	HFR8A12F			UNIT
		Min.	Typ.	Max.	
Recurrent Peak Reverse Voltage	VRRM	-	-	1200	V
RMS Voltage	VRMS	-	-	840	V
DC Blocking Voltage	VDC	-	-	1200	V
Average Forward Rectified Current $T_c=140^\circ\text{C}$	IF(AV)	-	-	8.0	A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	-	-	100	A
Instantaneous Forward Voltage @ 8.0 A	V <sub>F</sub>	-	-	3.2	V
DC Reverse Current @ $T_J=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_J=150^\circ\text{C}$	I <sub>R</sub>	-	-	100 500	uA uA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	-	-	35	nS
Typical junction Capacitance (Note 2)	C <sub>J</sub>	-	25	-	pF
Typical Thermal Resistance (Note 3)	R <sub>θJC</sub>	-	-	2	°CW
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65	-	175	°C

NOTES : (1) Reverse recovery test conditions  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{rr} = 0.25\text{A}$ .  
(2) Junction Capacitance test conditions :  $V_R = 10\text{V}$ ,  $I_F = 0\text{A}$ .  
(3) Thermal Resistance junction to case.

# RATINGS AND CHARACTERISTIC CURVES HFR8A12F

FIG.1 - FORWARD CURRENT DERATING CURVE

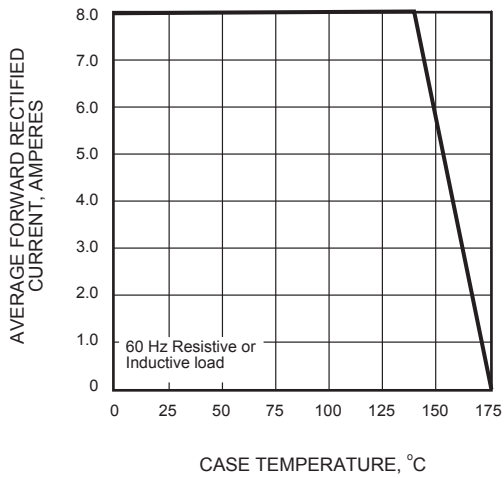


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

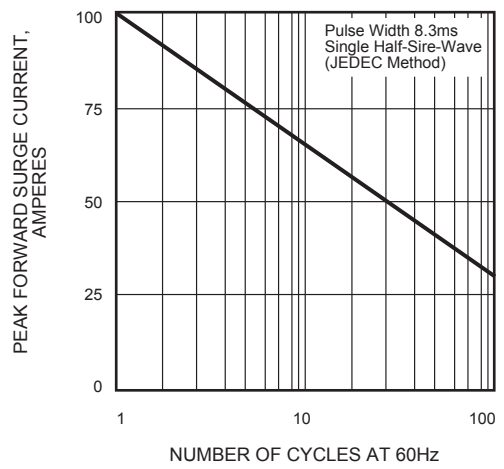


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

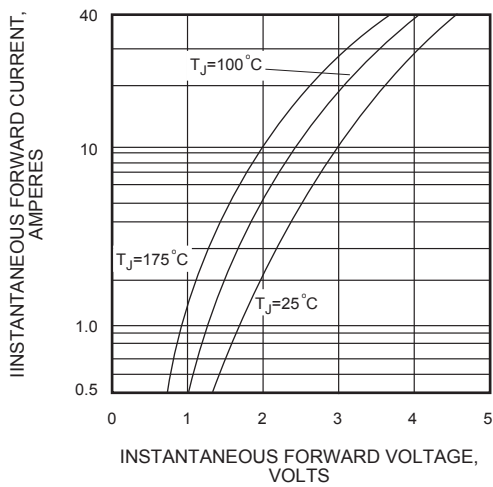


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

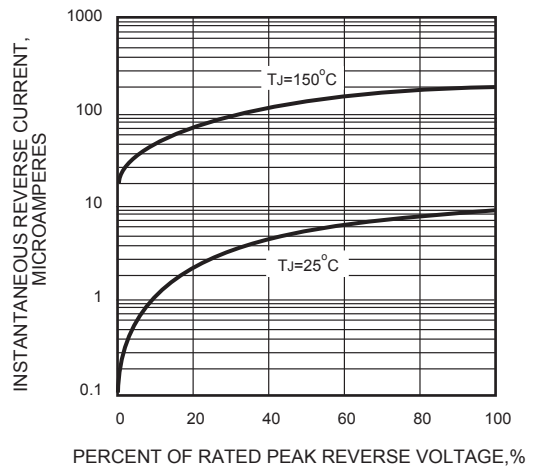


FIG.5 - TYPICAL JUNCTION CAPACITANCE

