



YENYO

# HFR8A12

Glass Passivated Hyperfast Recovery Rectifier

## Features

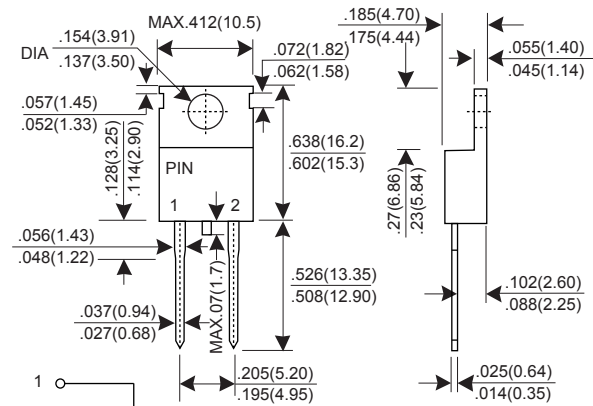
- ★ Fast switching for high efficiency
- ★ Low noise
- ★  $T_{rr} = 35\text{ns}$
- ★ Low reverse leakage current
- ★ High voltage super FRD
- ★ PFC application

## Mechanical Data

- ★ Case: Molded plastic TO-220AC
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Mounting position: Any
- ★ Weight: 2.07 grams

**Voltage Range 1200 V  
Current 8.0 Ampere**

### TO-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	HFR8A12			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	VF	-	-	3.2	V
DC Reverse Current @ $T_J=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_J=150^\circ\text{C}$	IR	-	-	100 500	uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	-	-	35	nS
Typical junction Capacitance (Note 2)	CJ	-	25	-	pF
Typical Thermal Resistance (Note 3)	RθJC	-	-	2	°CW
Operating Junction and Storage Temperature Range	TJ, TSTG	-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 HFR8A12

FIG.1 - FORWARD CURRENT DERATING CURVE

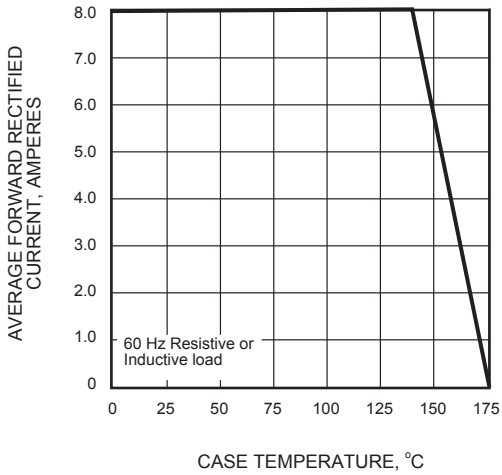


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

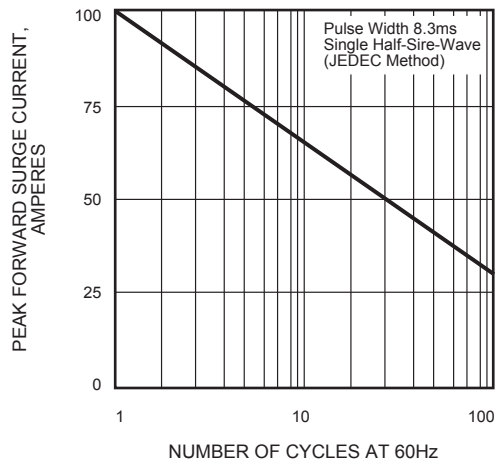


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

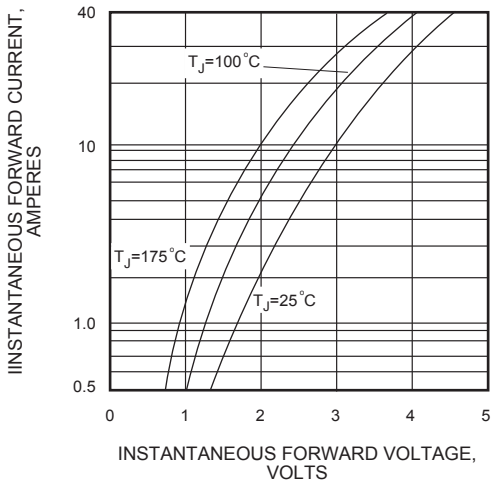


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

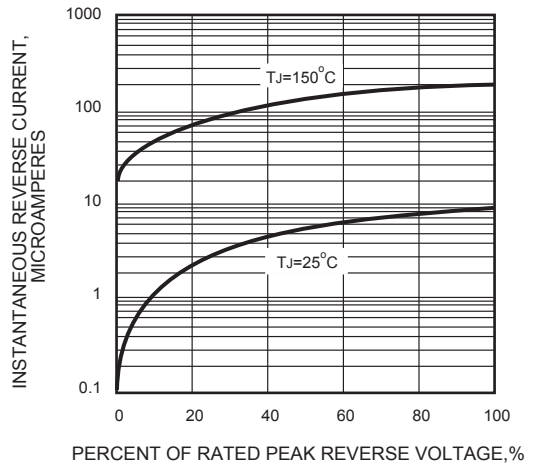


FIG.5 - TYPICAL JUNCTION CAPACITANCE

