



YENYO

# HFR10A06

Glass Passivated Hyper Fast Recovery Rectifier

## Features

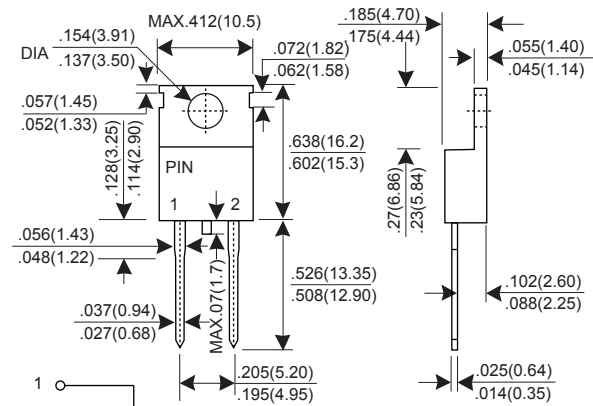
- ★ Fast switching for high efficiency
- ★ Low noise
- ★  $T_{rr} = 25\text{ns}$
- ★ Low reverse leakage current
- ★ High voltage super FRD
- ★ PFC application

## 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 600 V  
Current 10.0 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	HFR10A06			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 $T_c=140^\circ\text{C}$	$I_{F(AV)}$	-	-	10.0	A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	-	-	110	A
Instantaneous Forward Voltage @ 10.0 A	$V_F$	-	-	2.4	V
DC Reverse Current @ $T_J=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_J=150^\circ\text{C}$	$I_R$	-	-	10.0 500	$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	-	-	25	nS
Typical junction Capacitance (Note 2)	$C_J$	-	55	-	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	-	2.0	-	$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-65	-	175	$^\circ\text{C}$

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) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.  
(3) Thermal Resistance junction to case.

# RATINGS AND CHARACTERISTIC CURVES HFR10A06

FIG.1 - FORWARD CURRENT DERATING CURVE

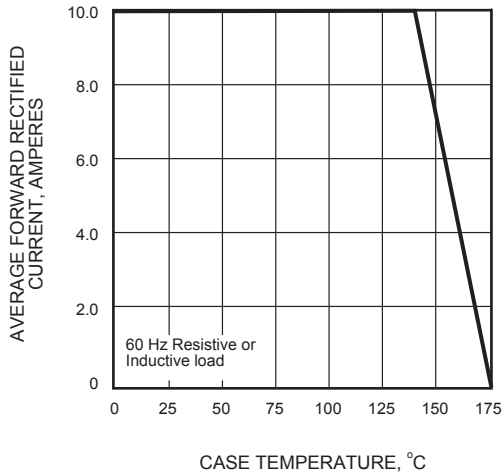


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

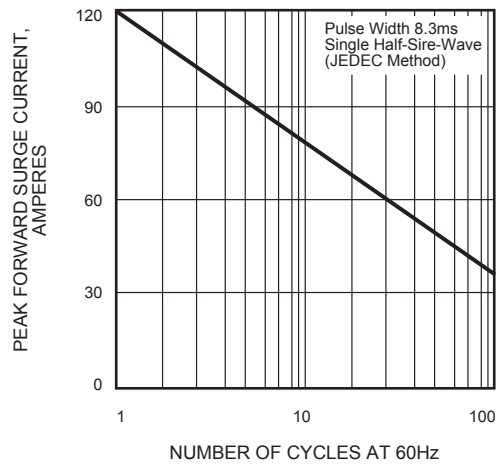


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

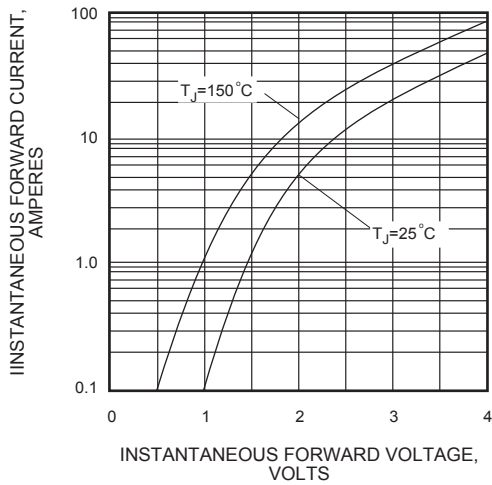


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

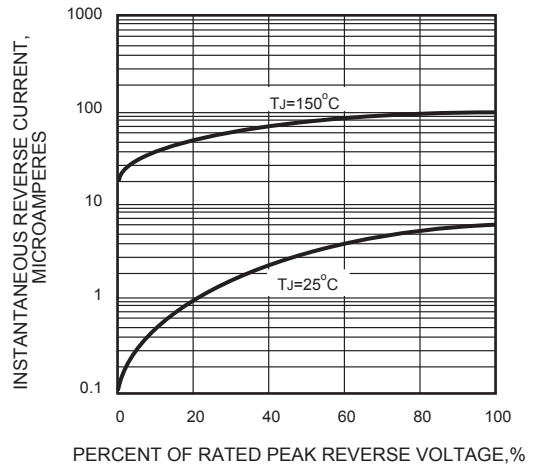


FIG.5 - TYPICAL JUNCTION CAPACITANCE

