

# HFR30A06PL

## Hyperfast Recovery Rectifier

### Features

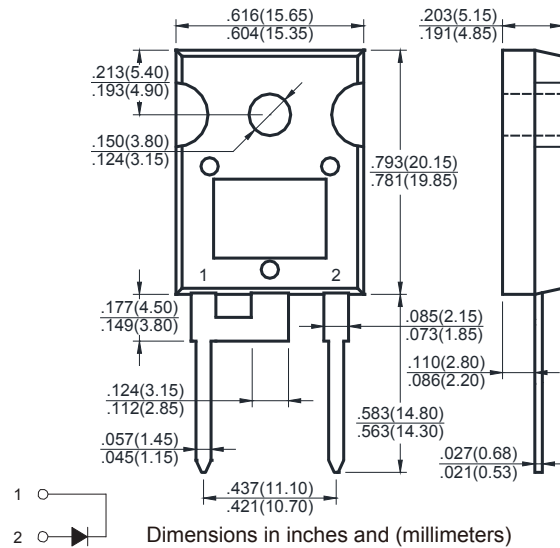
- ★ Fast switching for high efficiency
- ★ Low noise
- ★ Low reverse leakage current
- ★ High surge current capability
- ★ High voltage super FRD
- ★ PFC application

### Mechanical Data

- ★ Case: Molded plastic TO-247-2L
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: As marked
- ★ Mounting position: Any

**Voltage 600 Volt**  
**Current 30 Ampere**

### TO-247-2L



### 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%.

PARAMETER	SYMBOL	HFR30A06PL			UNIT
		Min.	Typ.	Max.	
Recurrent Peak Reverse Voltage	$V_{RRM}$	-	-	600	V
RMS Voltage	$V_{RMS}$	-	-	420	V
DC Blocking Voltage	$V_{DC}$	-	-	600	V
Maximum Average Forward Rectified Current @ $T_C=120^\circ C$	$I_{F(AV)}$	-	-	30	A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	-	-	325	A
Maximum Instantaneous Forward Voltage @ $I_F=30A$	$V_F$	-	-	2.1	V
DC Reverse Current @ $T_C=25^\circ C$ At Rated DC Blocking Voltage @ $T_C=150^\circ C$	$I_R$	-	-	250 1000	$\mu A$
Reverse Recovery Time (Note 1)	$T_{rr}$	-	-	40	nS
Reverse Recovery Time (Note 2)	$T_{rr}$	-	-	40	nS
Typical junction Capacitance (Note 3)	$C_J$	-	85	-	pF
Thermal Resistance (Note 4)	$R_{\theta JC}$	-	-	1.2	$^\circ C/W$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-65	-	175	$^\circ C$

NOTES : (1) Reverse recovery test conditions  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{rr} = 0.25A$ .  
(2) Reverse recovery test conditions  $I_F = 1A$ ,  $dI_F/dt = 200A/\mu s$ .  
(3)  $V_R = 10A$ ,  $I_F = 0A$   
(4) Thermal Resistance junction to case.

# RATINGS AND CHARACTERISTICS CURVES HFR30A06PL

FIG.1 - FORWARD CURRENT DERATING CURVE

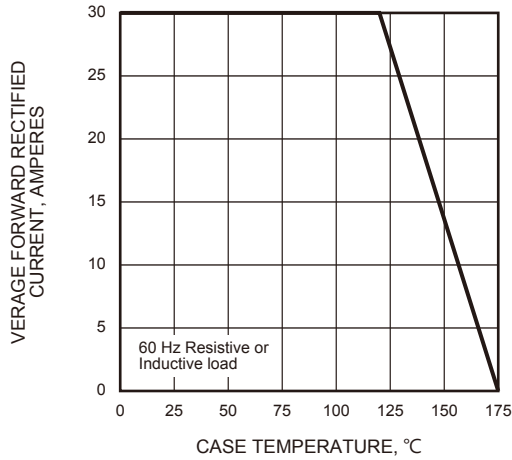


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

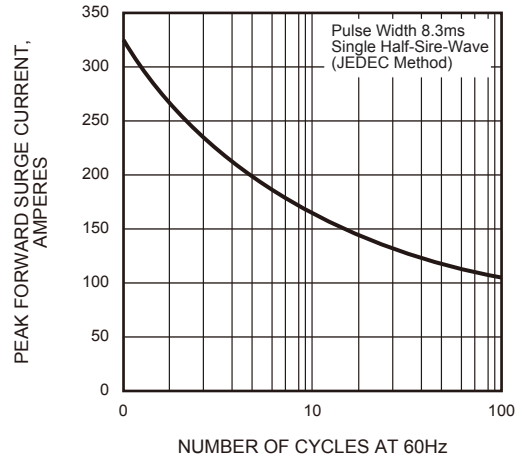


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

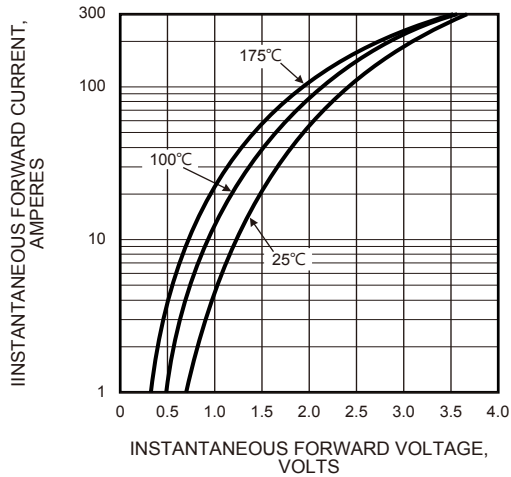


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

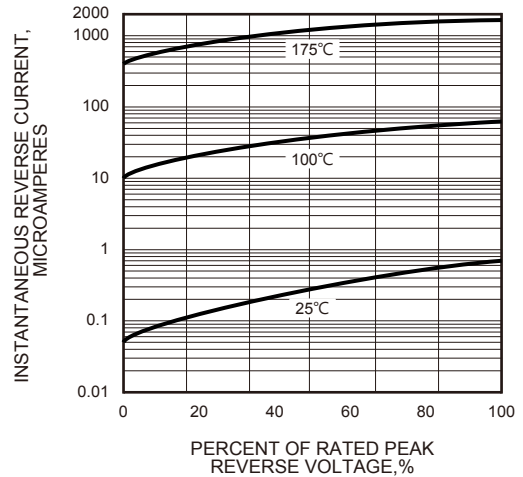


FIG.5 - TYPICAL JUNCTION CAPACITANCE

