

# HFR75A12PL

## Hyperfast Recovery Rectifier

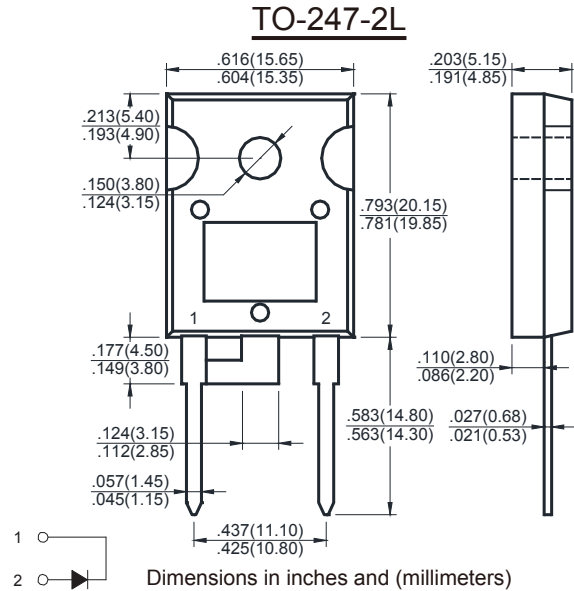
### Features

- ★ 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 Range 1200 V**  
**Current 75 Ampere**



### 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	HFR75A12P			UNIT
		Min.	Typ.	Max.	
Recurrent Peak Reverse Voltage	$V_{RRM}$	-	-	1200	V
RMS Voltage	$V_{RMS}$	-	-	840	V
DC Blocking Voltage	$V_{DC}$	-	-	1200	V
Maximum Average Forward Rectified Current @ $T_C=42^\circ C$	$I_{F(AV)}$	-	-	75	A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	-	-	500	A
Maximum Instantaneous Forward Voltage @ 75 A	$V_F$	-	-	3.2	V
DC Reverse Current @ $T_C=25^\circ C$ At Rated DC Blocking Voltage @ $T_C=150^\circ C$	$I_R$	- -	- -	250 2000	$\mu A$
Reverse Recovery Time (Note 1)	$T_{rr}$	-	-	75	nS
Reverse Recovery Time (Note 2)	$T_{rr}$	-	-	85	nS
Thermal Resistance (Note 3)	$R_{\theta JC}$	-	-	0.8	$^\circ C/W$
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  $I_F = 1A$ ,  $dI_F/dt = 100A/\mu s$ .

(3) Thermal Resistance junction to case.

# RATINGS AND CHARACTERISTIC CURVES HFR75A12PL

FIG.1 - FORWARD CURRENT DERATING CURVE

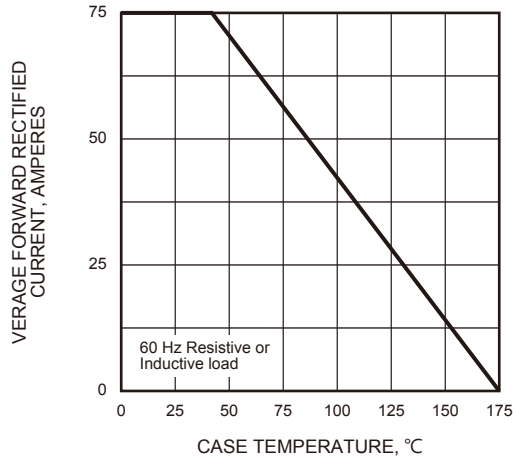


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

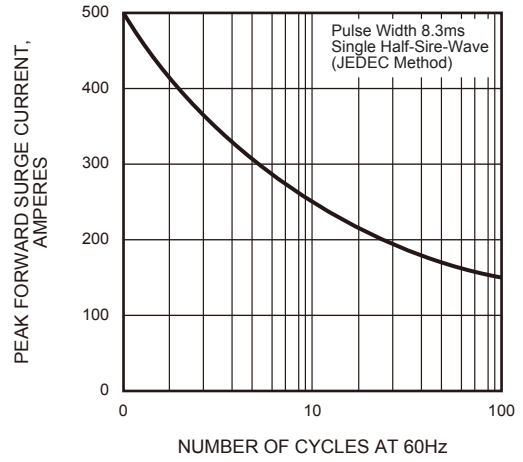


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

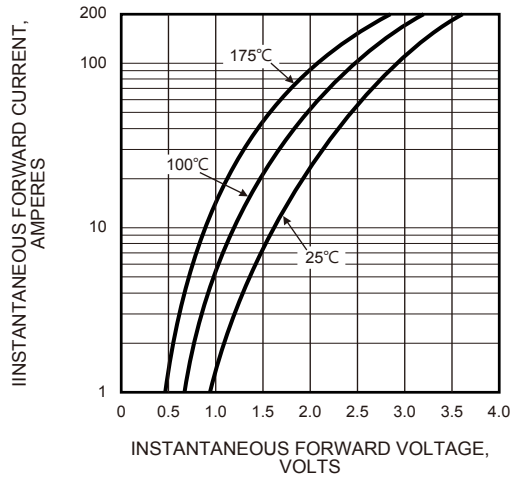


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

