

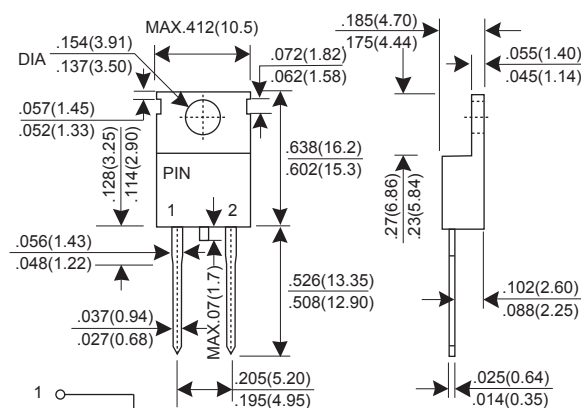


Hyperfast Recovery Rectifier

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

- ★ 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

TO-220AC



Dimensions in inches and (millimeters)

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	HFR30A12			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
Average Forward Rectified Current T _c = 80 °C	I _{F(AV)}	-	-	30.0	A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	-	-	250	A
Instantaneous Forward Voltage @30A(25°C) @30A(150°C)	V _F	-	-	3.2 2.8	V
DC Reverse Current @T _J =25°C At Rated DC Blocking Voltage @T _J =150°C	I _R	-	-	250 1000	uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	-	-	55	nS
Maximum Reverse Recovery Time (Note 2)	T _{rr}			85	nS
Typical junction Capacitance (Note 3)	C _J	-	60	-	pF
Typical Thermal Resistance (Note 4)	R _{θJC}	-	-	1.2	°CW
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-65	-	175	°C

NOTES : (1) Reverse recovery test conditions $I_F = 0.5A$, $I_R = 1A$, $I_{RR} = 0.25A$
 (2) Reverse recovery test conditions $I_F = 15A$, $dI_F/dt = 100A/\mu s$.
 (3) Junction Capacitance test conditions : $V_R = 10V$, $I_F = 0A$.
 (4) Thermal Resistance junction to case.

RATINGS AND CHARACTERISTIC CURVES HFR30A12

FIG.1 - FORWARD CURRENT DERATING CURVE

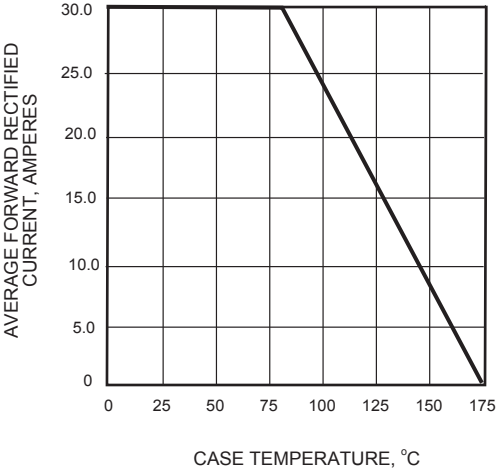


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

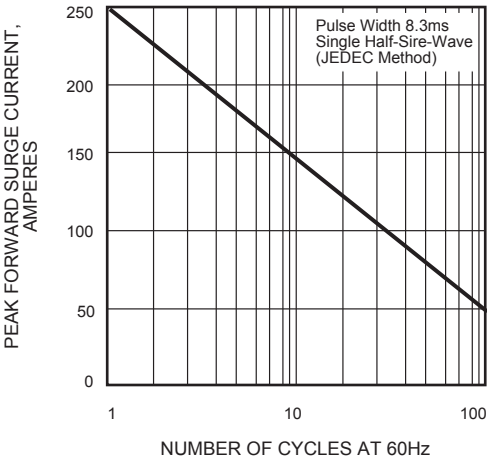


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

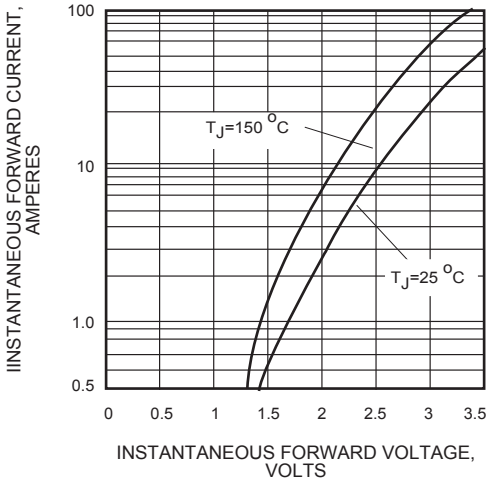


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

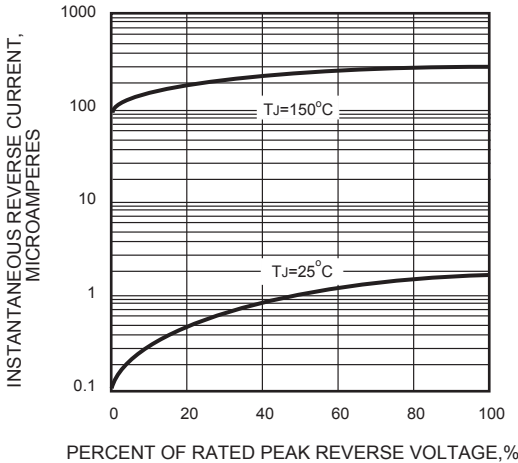


FIG.5 - T_{rr} , t_a AND t_b CURVES vs FORWARD CURRENT

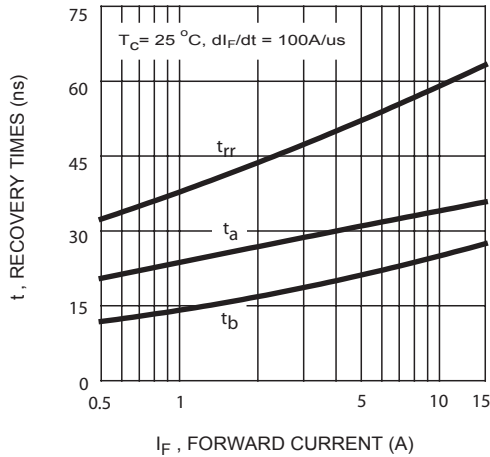


FIG.6 - TYPICAL JUNCTION CAPACITANCE

