

HFR30A12

Hyperfast Recovery Rectifier

Features

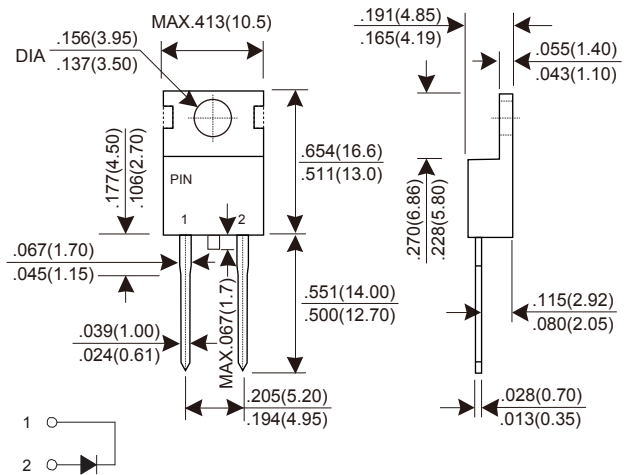
- ★ Fast switching for high efficiency
- ★ Low noise
- ★ Low reverse leakage current
- ★ High surge current capability
- ★ High voltage super FRD
- ★ PFC application

Mechanical Data

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

Voltage Range 1200 V
Current 30 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%.

PARAMETER	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
Maximum Average Forward Rectified Current @ $T_C=78^\circ C$	$I_{F(AV)}$	-	-	30	A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	-	-	300	A
Maximum Instantaneous Forward Voltage @ 30 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 1000	μA
Reverse Recovery Time (Note 1)	T_{rr}	-	-	55	nS
Reverse Recovery Time (Note 2)	T_{rr}	-	-	65	nS
Thermal Resistance (Note 3)	$R_{\theta JC}$	-	-	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 $I_F = 1A$, $di/dt = 100A/\mu s$.
(3) Thermal Resistance junction to case.

RATINGS AND CHARACTERISTIC CURVES HFR30A12

FIG.1 - FORWARD CURRENT DERATING CURVE

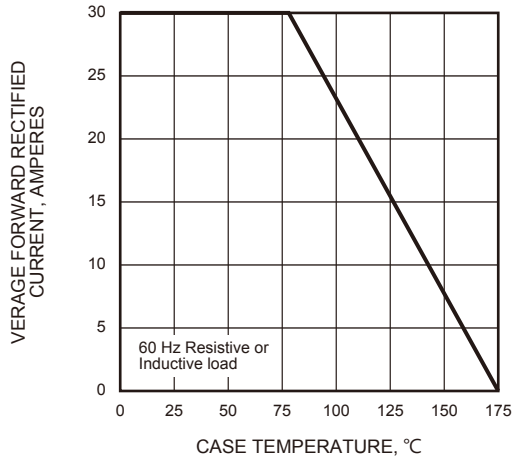


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

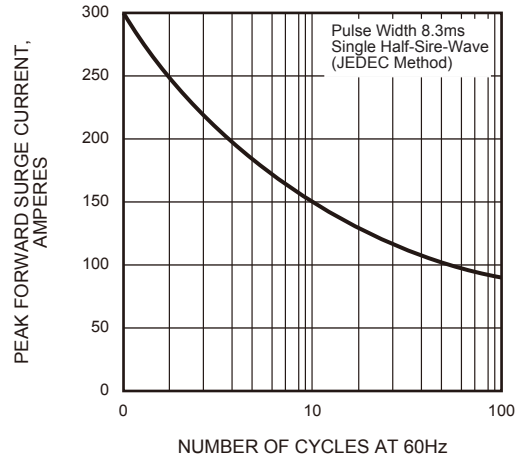


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

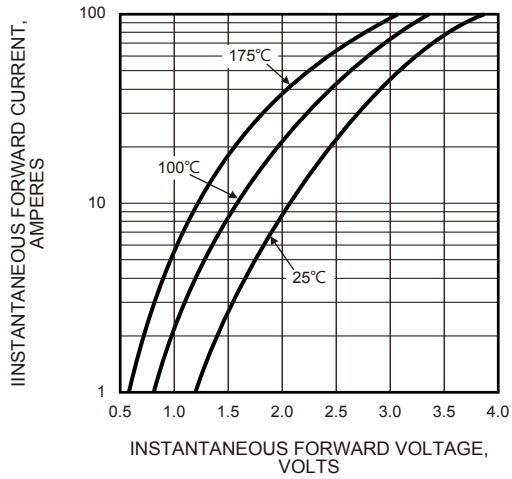


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

