

60A, 600V Hyperfast Dual Diode

Description

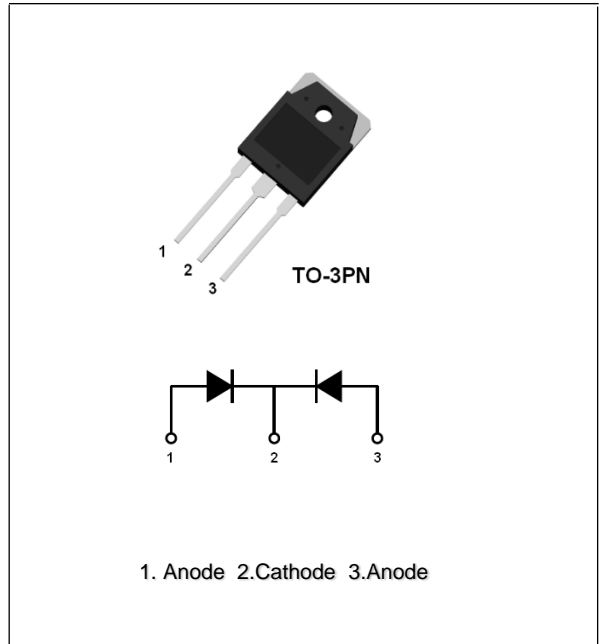
The AKFA60HP60DN is an Hyperfast dual diode with low forward voltage drop. This device is designed for FWD and power switching applications, It is specially suited for use in SMPS and industrial applications as welder and UPS.

Features

- Hyperfast Soft Recovery: $t_{rr}=34\text{ns}$ (typ.)
- Typical Forward Voltage: $V_F=1.7\text{V}$ @ $I_F=30\text{A}$
- Reverse Voltage: $V_{RRM}=600\text{V}$
- Avalanche Energy Rated

Applications

- FWD for Motor Application
- Switching Power Supply
- UPS



Absolute Maximum Ratings per diode at $T_C=25\text{ }^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	600	V
V_{RWM}	Working Peak Reverse Voltage	600	V
V_R	DC Blocking Voltage	600	V
$I_{F(AV)}$	Average Rectified Forward Current	per device at $T_C=120\text{ }^\circ\text{C}$ 60	A
I_{FSM}	Non-repetitive Peak Surge Current	300	A
T_J	Operating Junction Temperature Range	-65~+150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-65~+150	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Ratings	Unit
$R_{th(J-C)}$	Thermal Resistance, Junction to case	0.53	$^\circ\text{C}/\text{W}$

Electrical Characteristics per diode @T_C=25 °C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V _F	Forward Voltage Drop	I _F =30A	-	1.7	2.0	V
		I _F =30A, T _C =125°C	-	-	1.7	V
I _R	Reverse Leakage Current	V _R =600V	-	-	1	uA
t _{rr}	Reverse Recovery Time	I _F =30A, di/dt=-200A/us	-	34	-	ns
W _{AVL}	Avalanche Energy	L=5mH	75	-	-	mJ

Typical Performance Characteristics

Fig. 1. Typical Characteristics: V_F vs. I_F

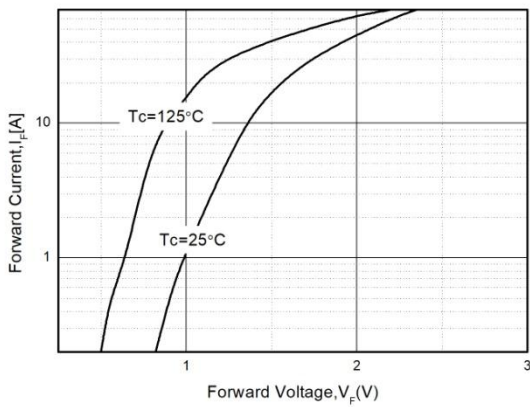


Fig. 2. Typical Characteristics: V_R vs. I_R

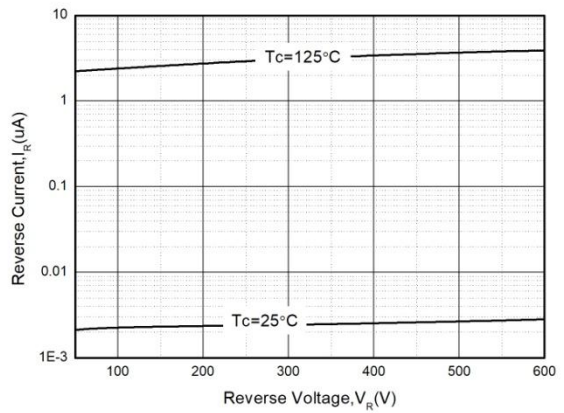


Fig. 3. Typical Reverse Recovery Time vs. di/dt

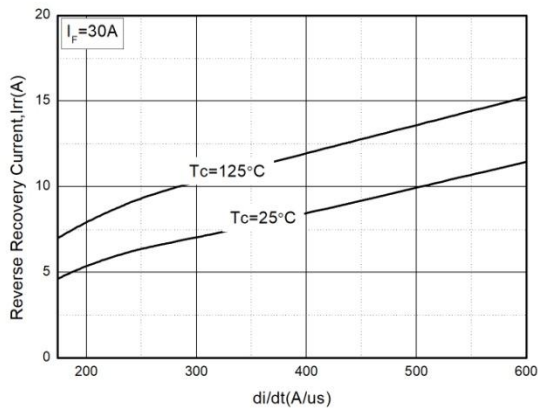
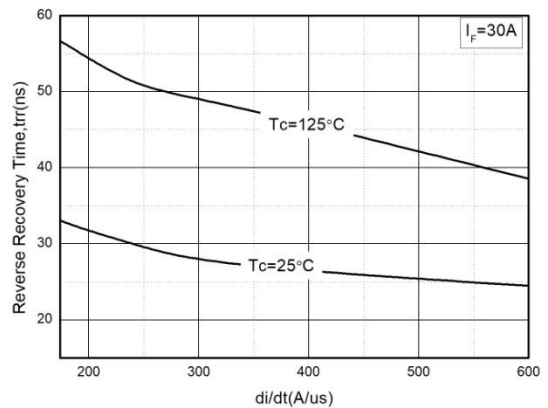


Fig. 4. Typical Reverse Recovery Time vs. di/dt



Package Dimensions

TO-3PN

(Dimensions in Millimeters)

