

60A, 1400V Standard Rectifier

Description

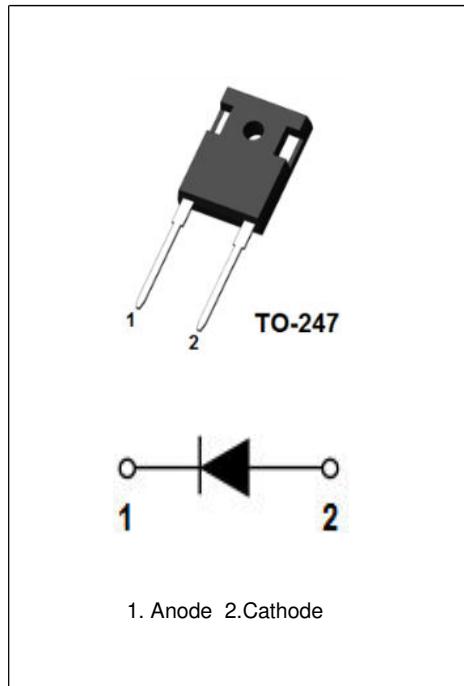
The AKD60140SH is a Standard Rectifier. It's a SIPOS+GPP double passivation chip with high reliability. It has low leakage current and low forward voltage drop, Improved thermal behavior.

Features

- Typical Forward Voltage: $V_F=1.15V$ @ $I_F=60A$
- Reverse Voltage: $V_{RRM}=1400V$
- Avalanche Energy Rated
- SIPOS+GPP double passivation

Applications

- Diode for main rectification
- For single and three phase
- Bridge configurations



Absolute Maximum Ratings

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

Symbol	Parameter			Ratings	Unit	
V_{RRM}	Peak Repetitive Reverse Voltage			1400	V	
V_{RWM}	Working Peak Reverse Voltage			1400	V	
V_R	DC Blocking Voltage			1400	V	
$I_{F(AV)}$	Average Rectified Forward Current	$t = 10 \text{ ms}$ (50 Hz), sine		60	A	
I_{FSM}	Non-repetitive Peak Surge Current		$T_{VJ} = 45^\circ\text{C}$ $V_R = 0 \text{ V}$	720	A	
			$T_{VJ} = 150^\circ\text{C}$ $V_R = 0 \text{ V}$	540		
I^2t	value for fusing	$t = 10 \text{ ms}$ (50 Hz), sine	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0 \text{ V}$	2590	A^2s	
			$T_{VJ} = 150^\circ\text{C}$ $V_R = 0 \text{ V}$	1460		
T_J	Operating Junction Temperature Range			-40~+150	°C	
T_{STG}	Storage Temperature Range			-40~+150	°C	

Thermal Characteristics

Symbol	Parameter	Ratings	Unit
$R_{th\ (J-C)}$	Thermal Resistance, Junction to case	1.1	°C/W

Electrical Characteristics per diode @ $T_C=25\text{ °C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage Drop	$I_F=60\text{A}$	-	1.15	1.50	V
		$I_F=60\text{A}, T_C=120\text{ °C}$	-	-	1.2	V
I_R	Reverse Leakage Current	$V_R=1400\text{V}$	-	-	1	mA

Typical Performance Characteristics

Fig. 1. Typical Characteristics: V_F vs. I_F

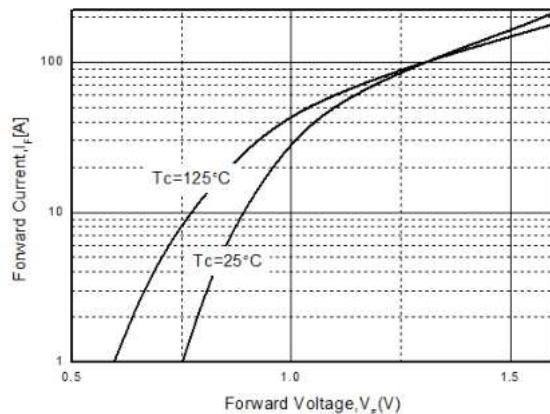
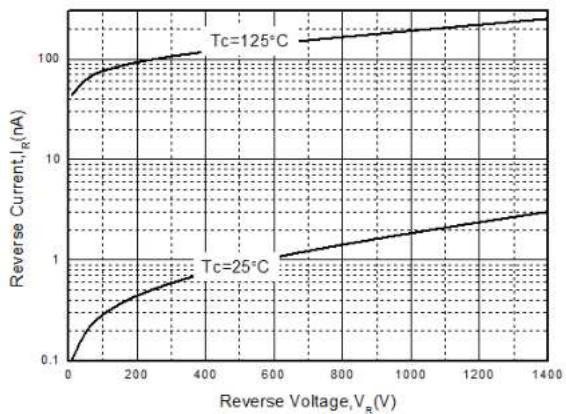


Fig. 2. Typical Characteristics: V_R vs. I_R



Package Dimensions**TO-247**

(Dimensions in Millimeters)

