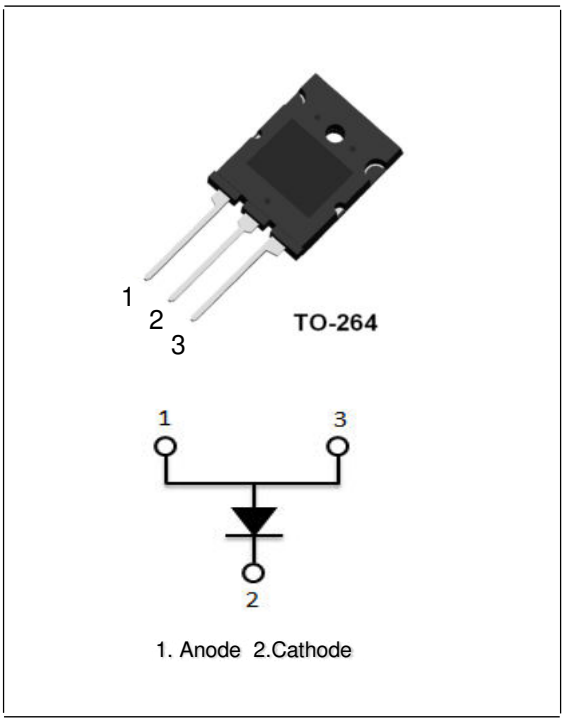
60A, 1400V Standard Rectifier



Description

The AKD60140NCL 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 behaviour

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 ℃ 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	per device at T_C=120℃		60	A
I_{FSM}	Non-repetitive Peak Surge Current	t = 10 ms (50 Hz), sine	T_{VJ}= 45℃ V_R = 0 V	720	A
			T_{VJ}= 150℃ V_R = 0 V	540	
I^2t	value for fusing	t = 10 ms (50 Hz), sine	T_{VJ}= 45℃ V_R = 0 V	2590	A^2S
			T_{VJ}= 150℃ V_R = 0 V	1460	
T_J	Operating Junction Temperature Range			-40~+150	℃
T_{STG}	Storage Temperature Range			-40~+150	℃

Thermal Characteristics

Symbol	Parameter	Ratings	Unit
$R_{th\ (J-C)}$	Thermal Resistance, Junction to case	0.38	℃/W

Electrical Characteristics per diode @T_C=25 ℃ unless otherwise noted

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

Typical Performance Characteristics

Fig. 1. Typical Characteristics: V_F vs. I_F

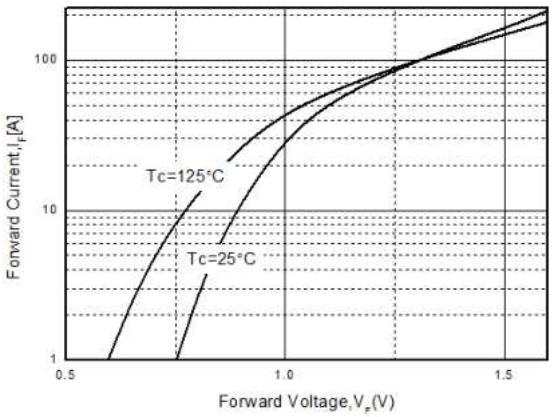
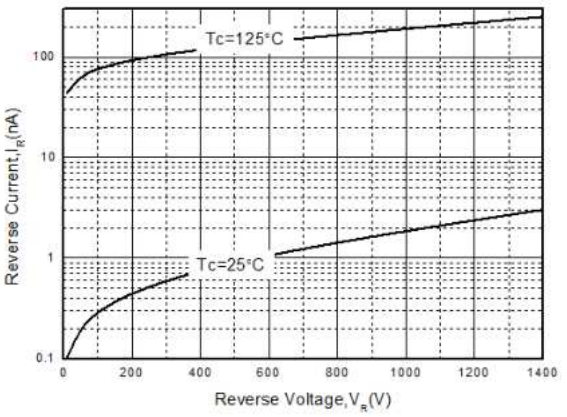


Fig. 2. Typical Characteristics: V_R vs. I_R



Package Dimensions

TO-264

(Dimensions in Millimeters)