

$V_{RSM} = 60\text{ V}$, $I_{F(AV)} = 0.7\text{ A}$
Schottky Diode
AK06

Description

The AK06 is a 60 V, 0.7 A Schottky diode with allowing improvements in V_F and I_R characteristics.

These characteristic features contribute to improving power supply efficiency and to enabling high-frequency systems.

Features

- V_{RSM} ----- 60 V
- $I_{F(AV)}$ ----- 0.7 A
- V_F ($I_F = 0.7\text{ A}$) ----- 0.517 V typ.
- Bare Leads: Pb-free (RoHS Compliant)

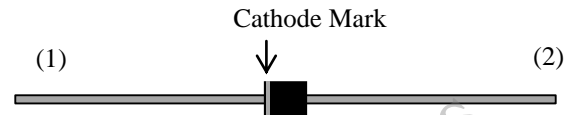
Applications

The high speed switching applications as follows:

- DC-DC Converter
- Adapter

Package

Axial ($\phi 2.4 \times 2.9\text{L} / \phi 0.57$)



(1) Cathode
(2) Anode

Not to scale

Absolute Maximum Ratings

Unless otherwise specified, $T_A = 25\text{ }^{\circ}\text{C}$.

Parameter	Symbol	Rating	Unit	Conditions
Peak Repetitive Reverse Voltage	V_{RSM}	60	V	
Repetitive Reverse Voltage	V_{RM}	60	V	
Average Forward Current	$I_{\text{F(AV)}}$	0.7	A	See Figure 2 and Figure 3
Surge Forward Current	I_{FSM}	10	A	Half cycle sine wave, positive side, 10 ms, 1 shot
I^2t Limiting Value	I^2t	0.5	A^2s	$1\text{ ms} \leq t \leq 10\text{ms}$
Junction Temperature	T_J	-40 to 150	$^{\circ}\text{C}$	
Storage Temperature	T_{STG}	-40 to 150	$^{\circ}\text{C}$	

Electrical Characteristics

Unless otherwise specified, $T_A = 25\text{ }^{\circ}\text{C}$.

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage Drop	V_F	$I_F = 0.7\text{ A}$	—	0.517	0.62	V
Reverse Leakage Current	I_R	$V_R = V_{\text{RM}}$	—	—	1.0	mA
Reverse Leakage Current Under High Temperature	$H \cdot I_R$	$V_R = V_{\text{RM}}, T_J = 150\text{ }^{\circ}\text{C}$	—	—	30	mA
Thermal Resistance ⁽¹⁾	$R_{\text{th(J-L)}}$	See Figure 1	—	—	22	$^{\circ}\text{C/W}$

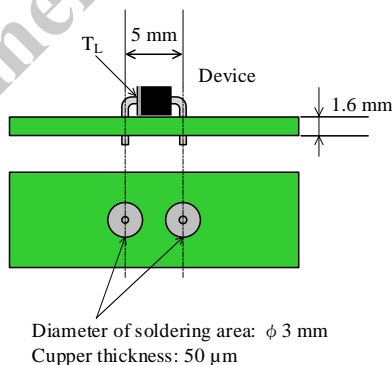


Figure 1 Lead Temperature Measurement Conditions

⁽¹⁾ $R_{\text{th(J-L)}}$ is thermal resistance between junction and lead.

Rating and Characteristic Curves

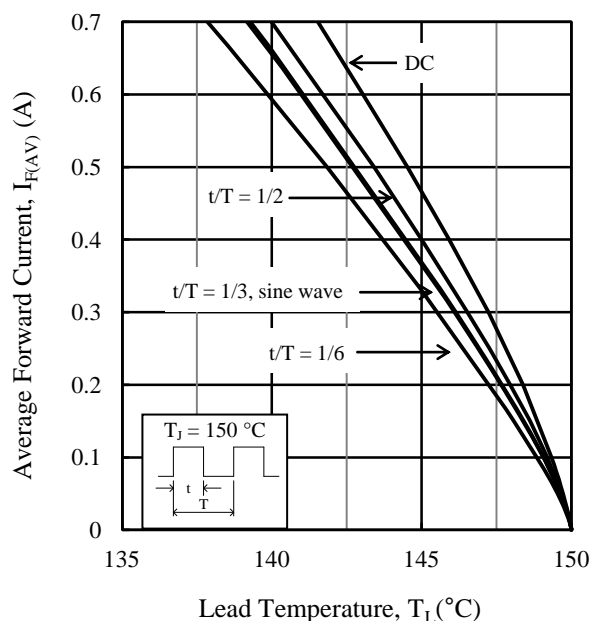


Figure 2. $I_{F(AV)}$ vs. T_L Typical Characteristics⁽²⁾
($V_R = 0$ V)

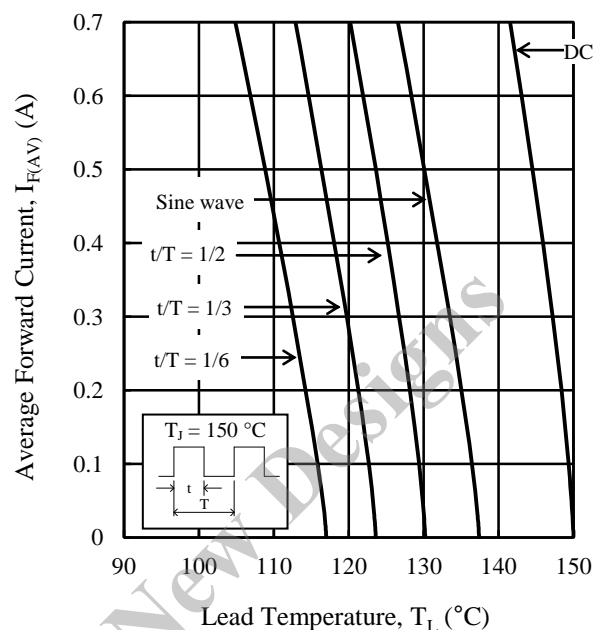


Figure 3. $I_{F(AV)}$ vs. T_L Typical Characteristics⁽²⁾
($V_R = 60$ V)

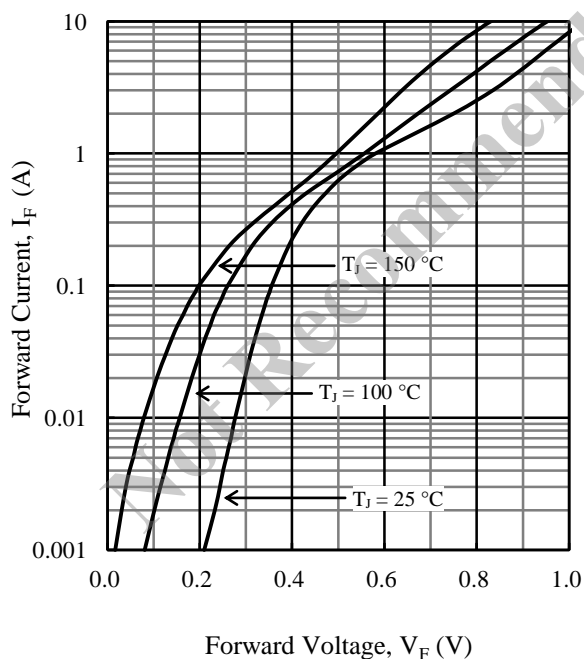


Figure 4. V_F vs. I_F Typical Characteristics

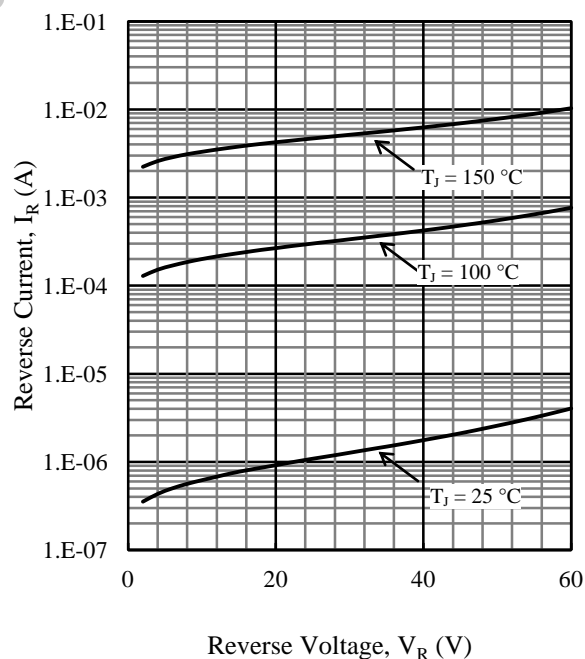
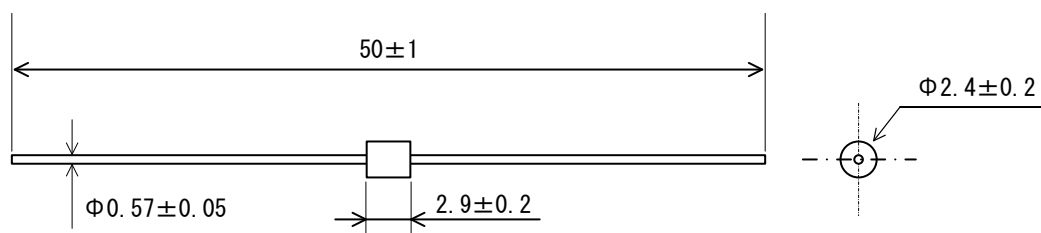


Figure 5. V_R vs. I_R Typical Characteristics

⁽²⁾ See Figure 1 for the lead temperature measurement conditions.

Physical Dimensions

• Axial ($\phi 2.4 \times 2.9L / \phi 0.57$)

NOTES:

- Dimensions in millimeters
- Bare leads: Pb-free (RoHS compliant)
- When soldering the products, it is required to minimize the working time, within the following limits:
 Flow: $260 \pm 5 \text{ }^{\circ}\text{C} / 10 \pm 1 \text{ s}$, 2 times
 Soldering Iron: $380 \pm 10 \text{ }^{\circ}\text{C} / 3.5 \pm 0.5 \text{ s}$, 1 time (Soldering should be at a distance of at least 1.5 mm from the body of the product.)

Marking Diagram

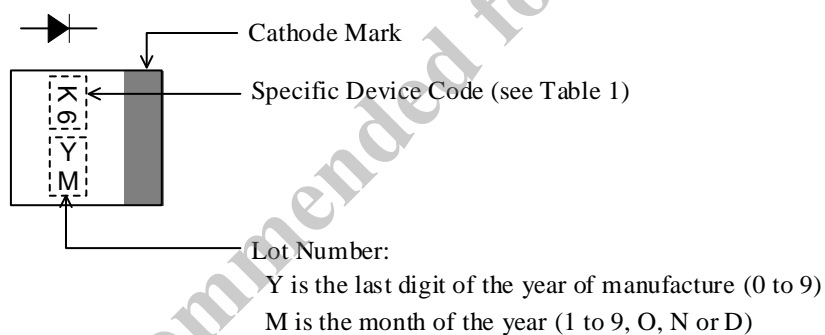


Table 1. Specific Device Code

Specific Device Code	Part Number
K6	AK06

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