

# 产 品 规 格 书

批 准	审 核	校 核	编 制
纪春华	朴致均	赵宇辉	郑羿
2019. 02. 25	2019. 02. 25	2019. 02. 25	2019. 02. 25

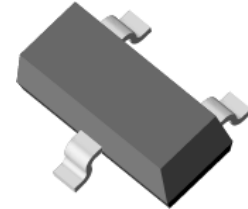
## 规格书更改履历:

序号	更改内容	履历号	更改时间	责任人
1	新规制定	000	2016. 08. 09	阎平
2	增加封页	001	2018. 01. 12	郑羿
3	增加Taping尺寸	002	2019. 02. 25	郑羿

## General Purpose Schottky Barrier Diode

### General Description

These Schottky barrier diodes are designed for high-speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction. Miniature surface mount package is excellent for hand-held and portable applications where space is limited.


**SOT-23**

### Features and Benefits

- Low forward drop voltage and low leakage current
- Very low switching time

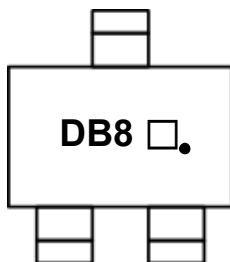
### Applications

- General purpose and high speed switching
- Protection circuit and voltage clamping

### Ordering Information

Part Number	Marking Code	Package	Packaging
KDB310WK	DB8 □●	SOT-23	Tape & Reel

### Marking Information

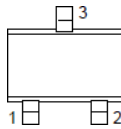
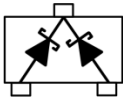


DB2 = Specific Device Code

□ = Year & Week Code Marking

● = Dalian

### Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Anode (Diode 1)		
2	Anode (Diode 2)		
3	Common Cathode		

## Absolute Maximum Ratings ( $T_{amb}=25^{\circ}\text{C}$ , Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Peak reverse voltage	$V_{RM}$	40	V
DC reverse voltage	$V_R$	30	V
Repetitive peak forward current	$I_{FRM}$	0.5	A
Forward current	$I_F$	0.2	A
Non-repetitive peak forward surge current( $t=10\text{ms}$ )	$I_{FSM}$	2	A
Power dissipation <sup>1)</sup>	$P_D$	150	mW

<sup>1)</sup> Device mounted on FR-4 board with recommended pad layout.

## Thermal Characteristics ( $T_{amb}=25^{\circ}\text{C}$ , Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Thermal resistance, junction to ambient <sup>1)</sup>	$R_{th(j-a)}$	833	$^{\circ}\text{C}/\text{W}$
Operating junction temperature	$T_j$	150	$^{\circ}\text{C}$
Storage temperature range	$T_{stg}$	-55 ~ 150	$^{\circ}\text{C}$

<sup>1)</sup> Device mounted on FR-4 board with recommended pad layout.

## Electrical Characteristics ( $T_{amb}=25^{\circ}\text{C}$ , Unless otherwise specified)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage <sup>2)</sup>	$V_{F(1)}$	$I_F=10\text{mA}$	-	-	0.4	V
	$V_{F(2)}$	$I_F=30\text{mA}$	-	-	0.5	V
Reverse leakage current <sup>3)</sup>	$I_R$	$V_R=30\text{V}$	-	-	1	$\mu\text{A}$
Total capacitance	$C_T$	$V_R=1\text{V}$ , $f=1\text{MHz}$	-	-	10	pF
Reverse recovery time	$t_{rr}$	$I_F=I_R=10\text{mA}$ , $I_{R(REC)}=1\text{mA}$	-	-	5	ns

<sup>2)</sup> Pulse test:  $t_p \leq 380\mu\text{s}$ , Duty cycle  $\leq 2\%$

<sup>3)</sup> Pulse test:  $t_p \leq 5\text{ms}$ , Duty cycle  $\leq 2\%$

## Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics

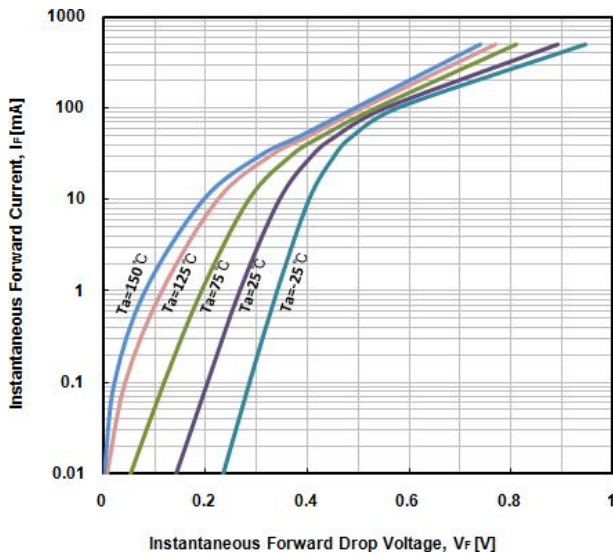


Fig. 2) Typical Reverse Characteristics

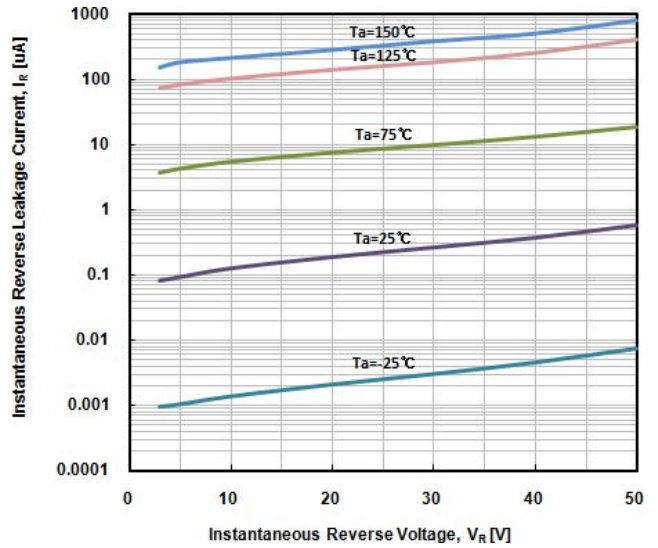


Fig. 3) Typical Total Capacitance Characteristics

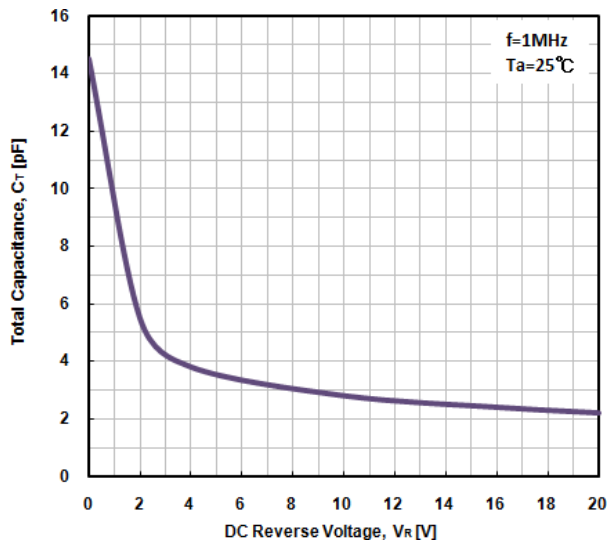


Fig. 4) Power dissipation vs. Ambient temperature

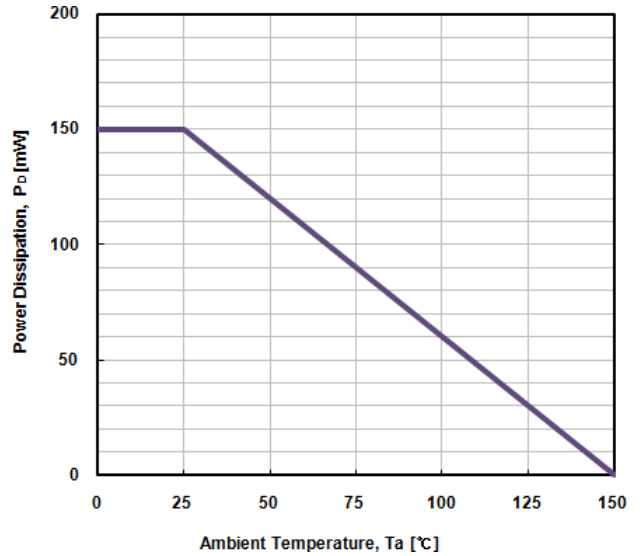
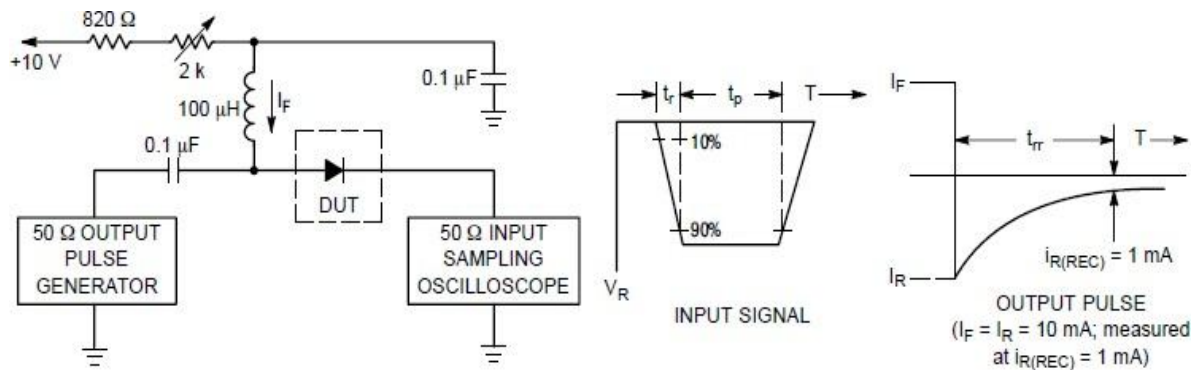
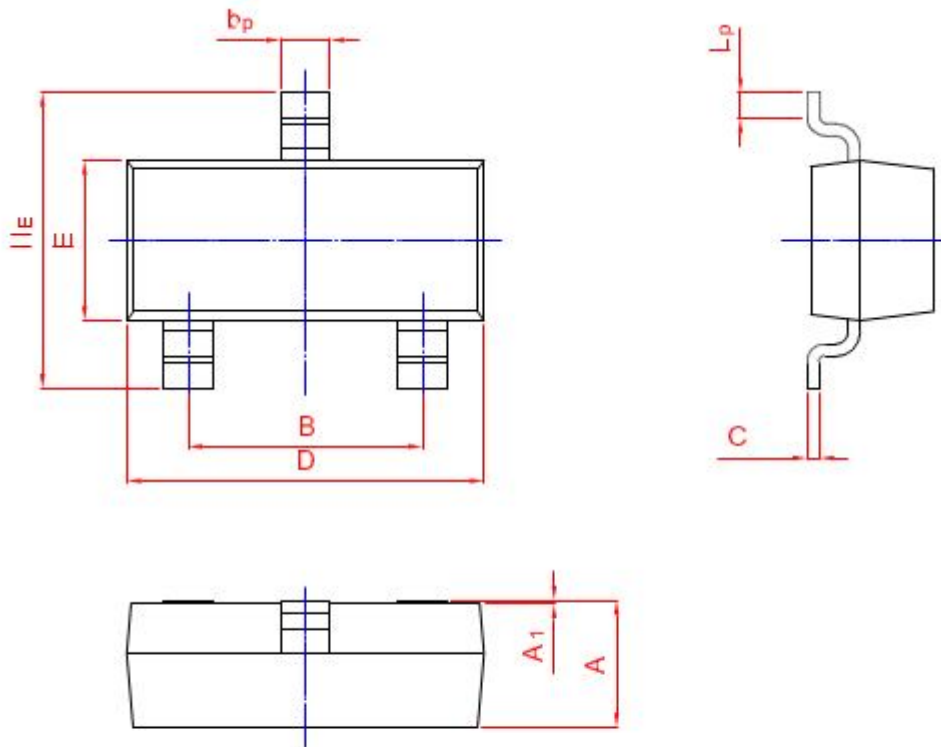


Fig. 5) Reverse recovery time equivalent test circuit

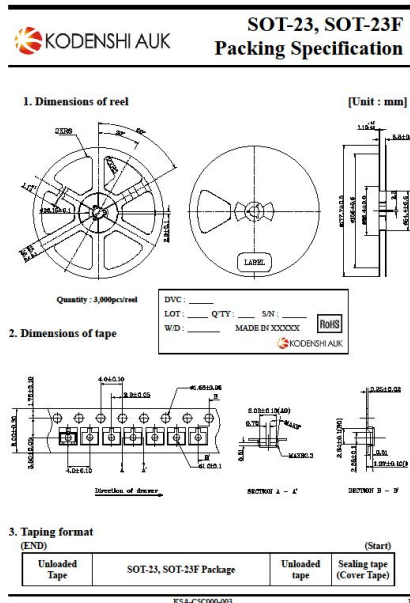
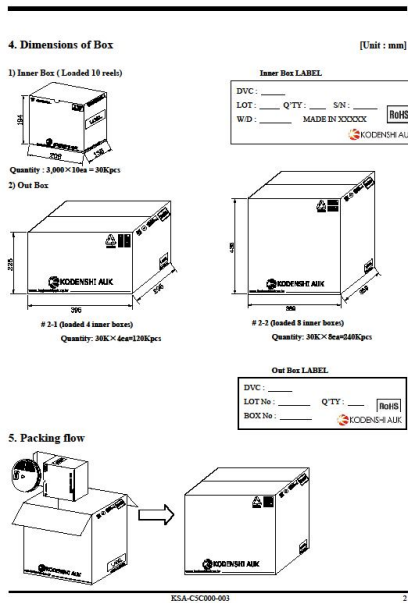


## Package Outline Dimensions



UNIT	A	B	$b_p$	C	D	E	$H_E$	$A_1$	$L_p$
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20

## Packing Specification



The AUK Dalian Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).

Please make sure that you consult with us before you use these AUK Dalian Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Dalian Corp. cannot accept liability to any damage which may occur in case these AUK Dalian Corp. products were used in the mentioned equipments without prior consultation with AUK Dalian Corp..

Specifications mentioned in this publication are subject to change without notice.