

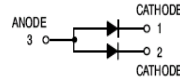
Features

- Fast switching speed
- High conductance
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

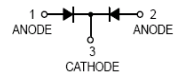
HF

Mechanical Data

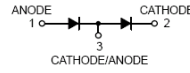
- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



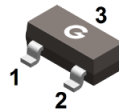
TBAV23A



TBAV23C



TBAV23S



SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TBAV23A	SOT-23	3000 pcs / Tape & Reel	KT7
TBAV23C	SOT-23	3000 pcs / Tape & Reel	KT6
TBAV23S	SOT-23	3000 pcs / Tape & Reel	KL31

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	250	V
Working Peak Reverse Voltage	V _{RWM}	200	V
DC Blocking Voltage	V _R	200	V
RMS Reverse Voltage	V _{R(RMS)}	141	V
Forward Continuous Current	I _F	225	mA
Maximum Forward Continuous Current	I _{FM}	400	mA
Repetitive Peak Forward Surge Current	I _{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current, t = 1μs	I _{FSM}	9	A
Non-Repetitive Peak Forward Surge Current, t = 100μs		3	A
Non-Repetitive Peak Forward Surge Current, t = 10ms		1.7	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	350	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	220	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	140	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	150	°C/W
Operating Junction Temperature Range	T_J	-65 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	250	-	-	V
Forward Voltage	V_F	$I_F = 100\text{mA}$	-	-	1.00	V
		$I_F = 200\text{mA}$	-	-	1.25	V
Maximum Peak Reverse Current	I_R	$V_R = 200\text{V}$	-	-	100	nA
Total Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 30\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	50	ns

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

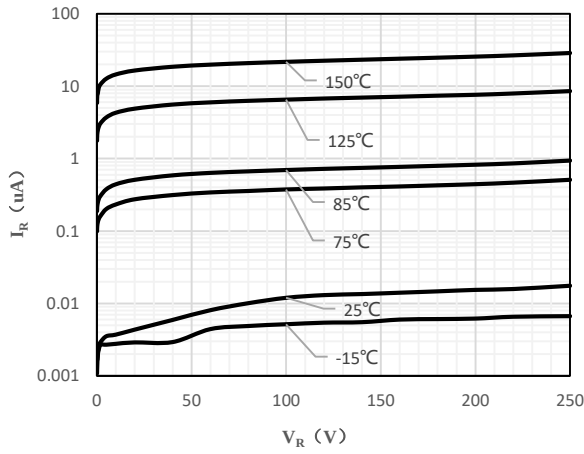


Fig 1 Typical Reverse Characteristic

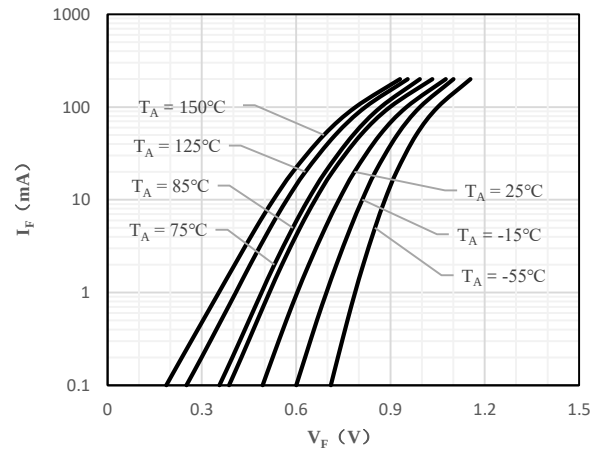


Fig 2 Typical Forward Characteristics

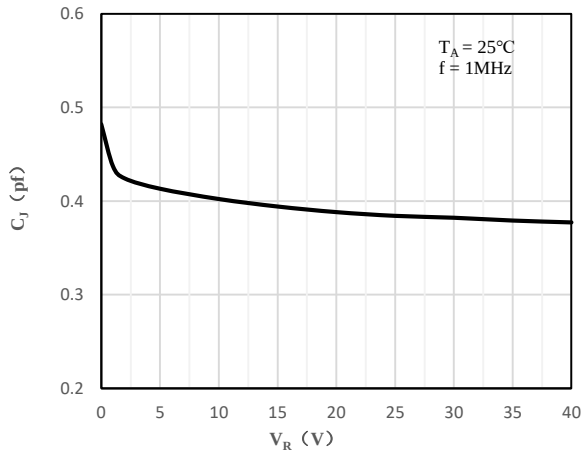


Fig 3 Capacitance vs. Reverse Voltage

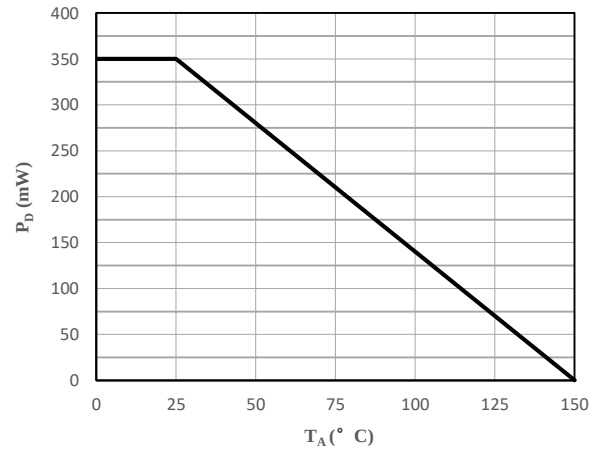
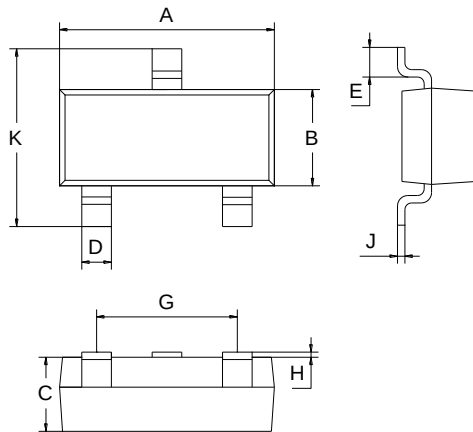


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.9	1.1
D	0.3	0.5
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23

