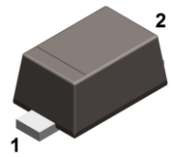
TKBAS521

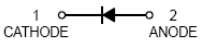
Switching Diode

Features

- Fast switching speed
- High conductance



SOD-523



Mechanical Data

- Case: SOD-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TKBAS521	SOD-523	8000 pcs / Tape & Reel	A

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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V_{RRM}	300	V
DC Blocking Voltage	V_R	300	V
Continuous Forward Current ($T_S \leq 90°C$) *1	I_F	250	mA
Peak Forward Surge Current, 1ms square wave	I_{FSM}	4.5	A
Repetitive Forward Current, 1ms	I_{FRM}	1	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation ($T_S \leq 90°C$) *1	P_D	500	mW
Thermal Resistance Junction-to-Air *2	$R_{\theta JA}$	400	°C/W
Thermal Resistance Junction-to-Case *2	$R_{\theta JC}$	285	°C/W
Thermal Resistance Junction-to-Lead *2	$R_{\theta JL}$	315	°C/W
Operating Junction Temperature Range	T_J	-65 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Notes:

1. T_S is the temperature at the soldering point of the cathode tab
2. The data tested by surface mounted on a 22mm * 17mm * 1mm FR4-epoxy P.C.B

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 100μA	300	-	-	V
Forward Voltage	V_F	I_F = 100mA	-	-	1.10	V
Maximum Peak Reverse Current	I_R	V_R = 250V	-	-	0.15	μA
		V_R = 250V, T_J = 150°C	-	-	100	μA
Total Capacitance	C_J	V_R = 0V, f = 1.0MHz	-	-	5	pF
Reverse Recovery Time	t_{rr}	I_F = I_R = 30mA	-	-	50	ns
		I_{rr} = 0.1×I_R, R_L = 100Ω				

Ratings and Characteristics Curves (@ T_A = 25°C unless otherwise specified)

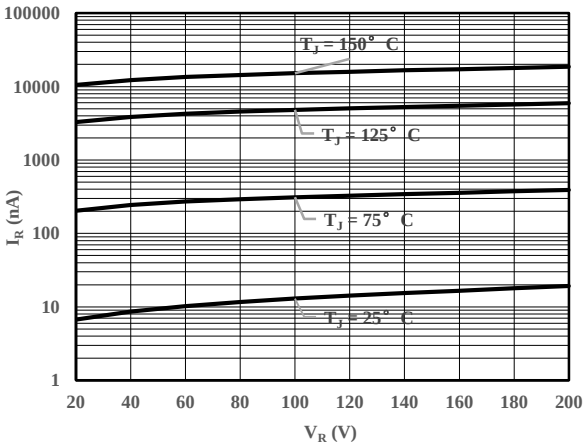


Fig 1 Typical Reverse Characteristic

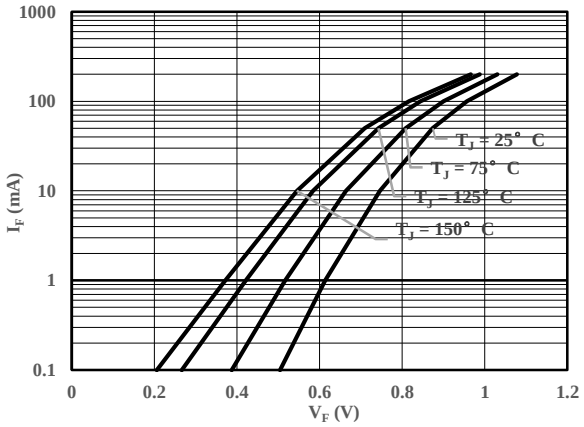
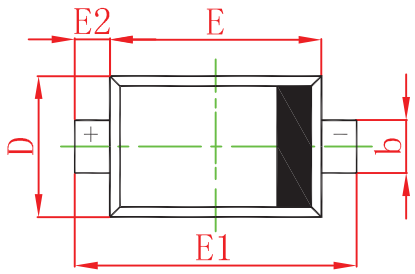
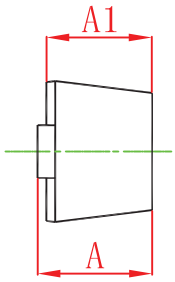
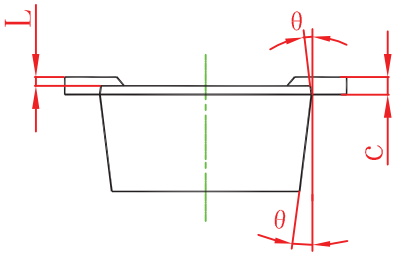


Fig 2 Typical Forward Characteristics

SOD-523 Package Outline Dimensions

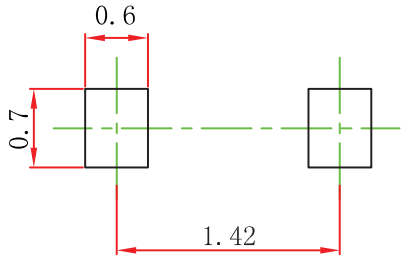






Symbol	Dimensions In Millimeters	
	Min	Max
A	0.530	0.590
A1	0.515	0.580
b	0.250	0.350
c	0.080	0.150
D	0.750	0.850
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
L	0.010	0.070
θ	7° REF	

SOD-523 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.