TECH PUBLIC
台舟电子

TPBT4148-123

Switching Diode

www.sot23.com.tw

Features

- Fast switching speed
- High conductance

APPLICATIONS

- Surface mount fast switching diode

Ordering Information

- Shipping Qty:3000/7inch Tape& Reel



SOD123



PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Peak Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}	75	V
DC Blocking Voltage	V_R	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Average Rectified Output Current	I_F	200	mA
Peak Forward Surge Current, 1μs Single Half-sine-wave	I_{FSM}	2	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I_{FSM}	1	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	350	mW
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	357	°C/W
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	225	°C/W
Operating Junction Temperature Range	T_J	-65 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 10μA	75	-	-	V
Forward Voltage	V_F	I_F = 1mA	-	-	0.715	V
		I_F = 10mA	-	-	0.855	V
		I_F = 50mA	-	-	1.000	V
		I_F = 150mA	-	-	1.250	V
Maximum Peak Reverse Current	I_R	V_R = 20V	-	-	25	nA
		V_R = 75V	-	-	2.5	μA
		V_R = 25V, T_J = 150°C	-	-	30	μA
		V_R = 75V, T_J = 150°C	-	-	50	μA
Total Capacitance	C_J	V_R = 0V, f = 1.0MHz	-	-	2	pF
Reverse Recovery Time	t_{rr}	I_F = I_R = 10mA I_{rr} = 0.1×I_R, R_L = 100Ω	-	-	4	ns

Typical Electrical Characteristic Curves

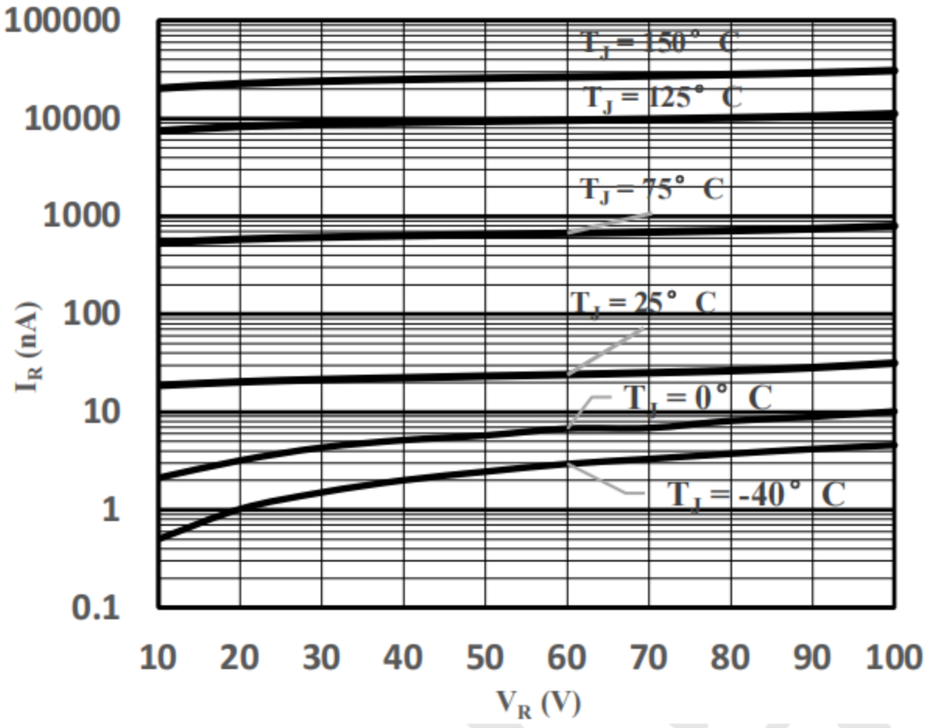


Fig 1 Typical Reverse Characteristic

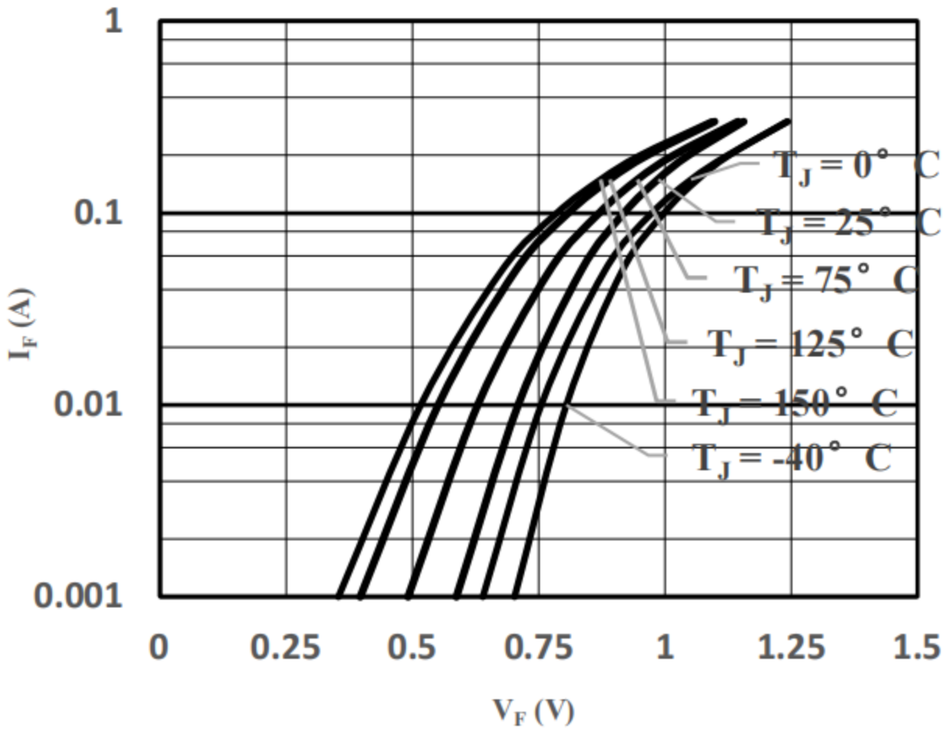


Fig 2 Typical Forward Characteristics

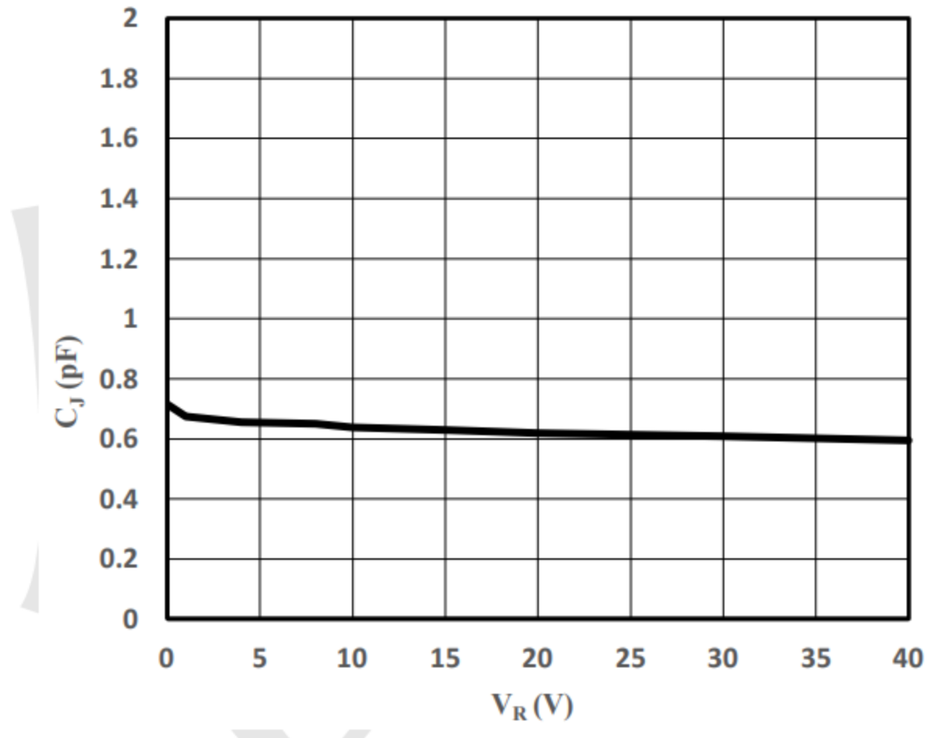


Fig 3 Capacitance vs. Reverse Voltage

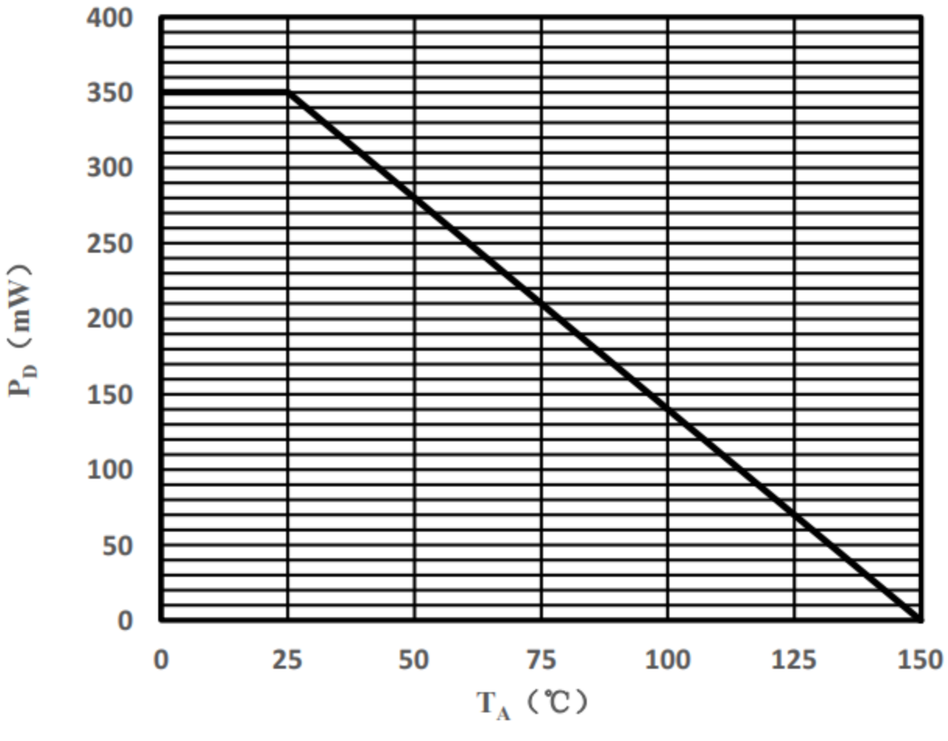
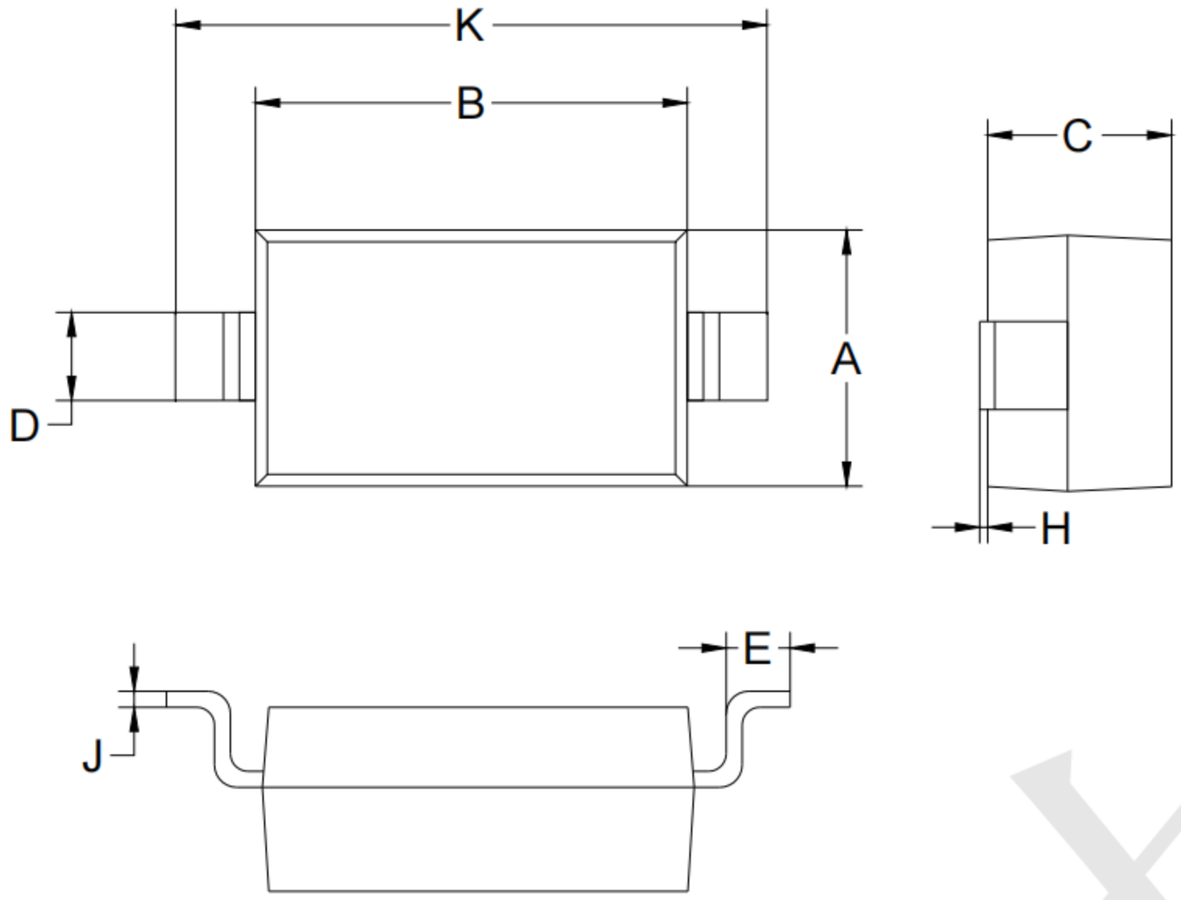


Fig 4 Power Derating Curve

Outline Drawing - SOD123 (unit: mm)



SOD-123		
Dim	Min	Max
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

Mounting Pad Layout-SOD123 (unit: mm)

