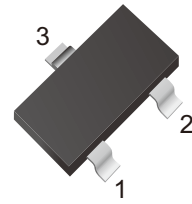
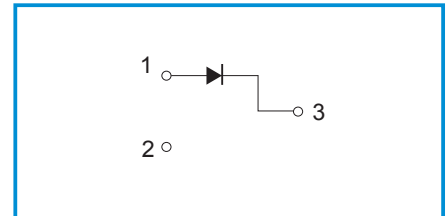


Switching Diode



Functional Diagram



Features

- Fast Switching Device (TRR <4.0 nS)
- Power Dissipation of 350mW
- High Stability and High Reliability
- Low reverse leakage
- Marking: 5D

Limiting Values(Absolute Maximum Ratings)

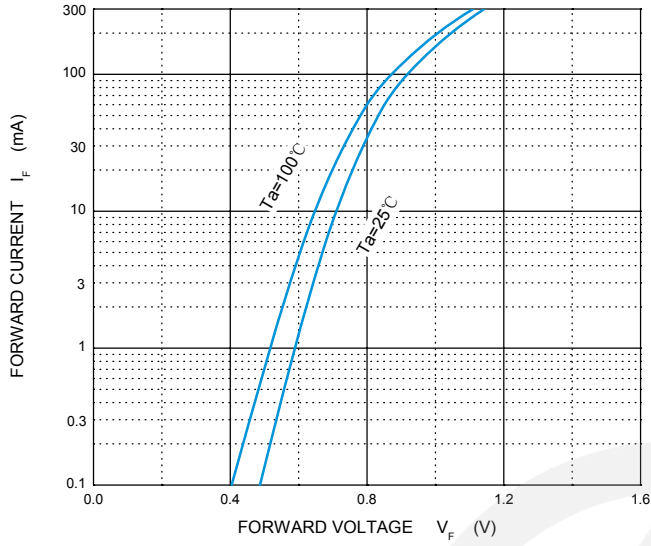
Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Average Rectified Output Current	I_O	300	mA
Non-Repetitive Peak Forward Surge Current @ $t=8.3ms$	I_{FSM}	2	A
Power Dissipation	P_D	350	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}C/W$
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}C$

Electrical Characteristics($T_a=25$ unless otherwise specified)

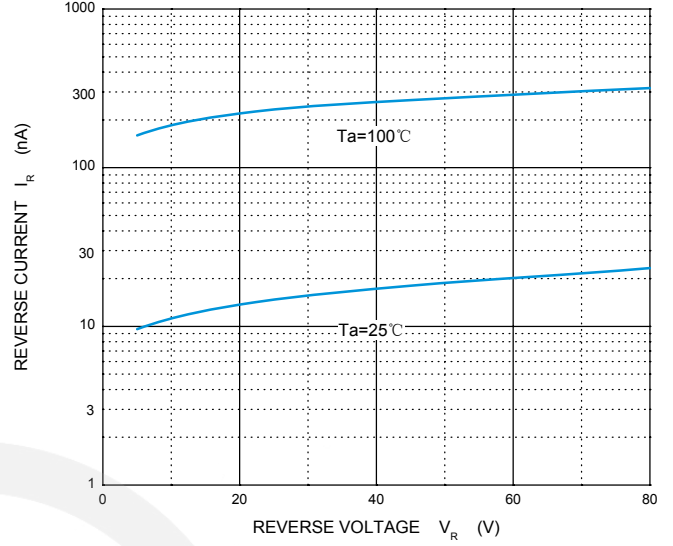
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse Breakdown Voltage	$V_{(BR)}$	100			V	$I_R=100\mu A$
Forward Voltage	V_{F1}			715	mV	$I_F=1mA$
	V_{F2}			855	mV	$I_F=10mA$
	V_{F3}			1000	mV	$I_F=50mA$
	V_{F4}			1250	mV	$I_F=150mA$
Reverse Current	I_{R1}			1	μA	$V_R=75V$
	I_{R2}			25	nA	$V_R=20V$
Diode Capacitance	C_D			2	pF	$V_R=0, f=1MHz$
Reverse Recovery Time	t_{rr}			4	ns	$I_F=I_R=10mA,$ $I_{rr}=0.1*I_R$

Typical Characteristics

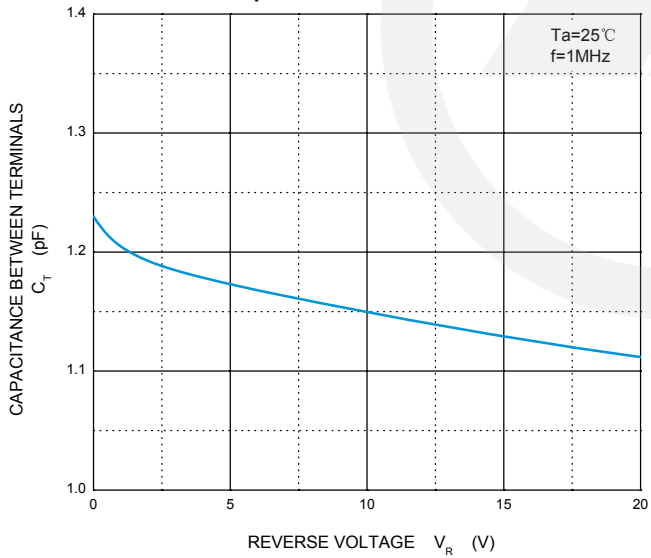
Forward Characteristics



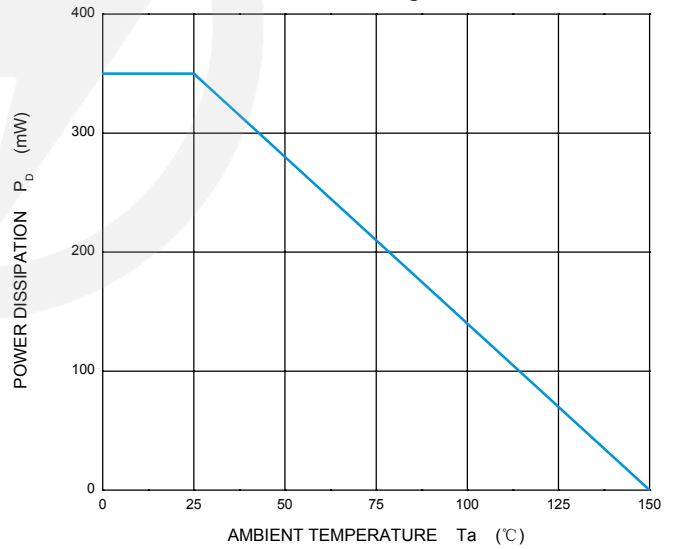
Reverse Characteristics



Capacitance Characteristics

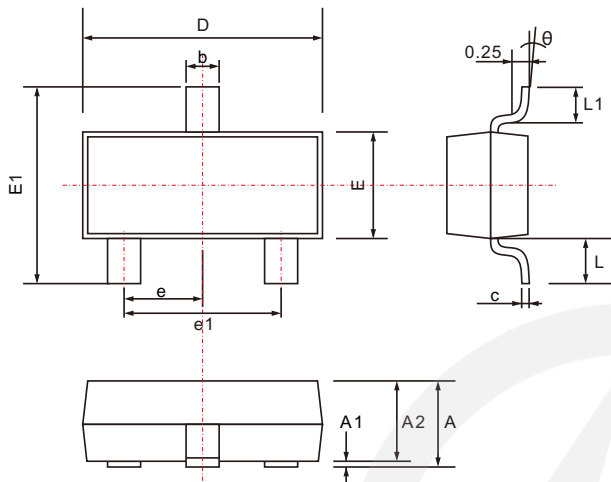


Power Derating Curve



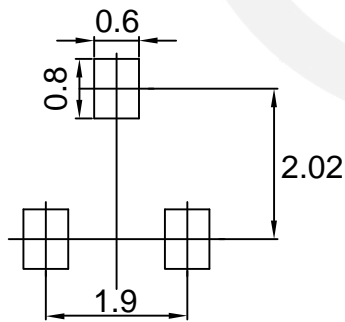
SOT-23 Package Outline

Unit: mm



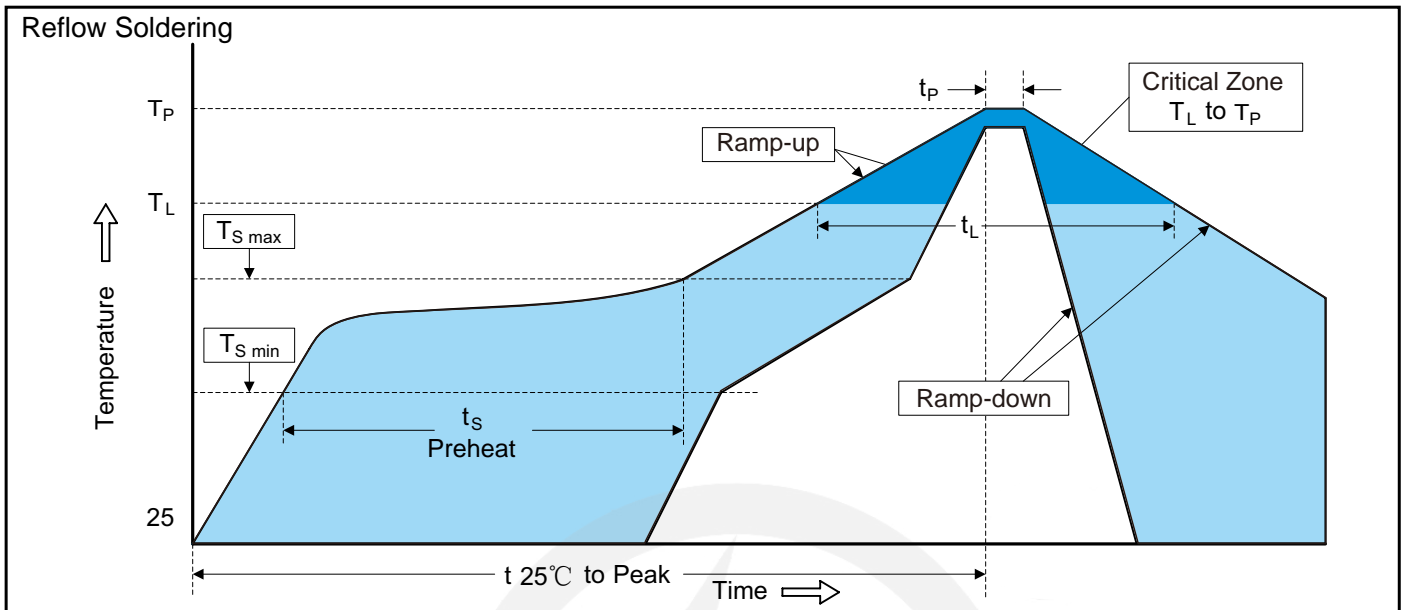
SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.200
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.200
D	2.700	3.100
E	1.200	1.400
E1	2.200	3.000
e	0.950 TYP.	
e1	1.750	2.050
L	0.550 TYP.	
L1	0.300	0.500
θ	0°	8°

SOT-23 Suggested Pad Layout



Note:

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

Recommended Soldering Conditions

Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

7" Reel


D2	$\Phi 178.0 \pm 2.0$
D3	$\Phi 50.0 \text{ Min.}$
D4	$\Phi 13.0 \pm 0.5$
W1	16.0 ± 2.0

Quantity: 3000PCS