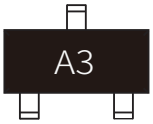
FEATURES

- Fast Switching Device (TRR <4.0 nS)
- Power Dissipation of 150mW
- High Stability and High Reliability
- Low reverse leakage

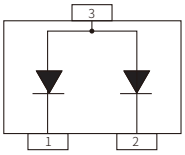
SOT-23



Marking

MECHANICAL DATA

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Reverse Peak Reverse Voltage	V_{RRM}	85	V
DC Blocking Voltage	V_R	80	V
Average Rectified Current	I_O	100	mA
Power Dissipation	P_D	150	mW
Non-repetitive Peak Forward Surge Current @t=8.3ms,TA=25°C	I_{FSM}	2.0	A
Operating Junction Temperature	T_J	-55 to +150	°C
Storage Temperature Range	T_S	-55 to +150	°C
Typical Thermal Resistance	$R_{\theta JA}$	833	°C/W

ELECTRICAL CHARACTERISTICS(T_A=25°C)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Breakdown Voltage	I_R= 100μA	V_{BR}	80			V
Reverse Current	V_R = 30V	I_R			0.1	μA
	V_R = 80V				0.5	
Forward Voltage	I_F =1mA	V_F		0.61		V
	I_F =10mA			0.74		
	I_F =100mA			0.93	1.2	
Reverse Recovery Time	I_F= I_R=10mA,R_L=100Ω V_R=6V,I_{rr}=0.1 X I_R	t_{rr}			4	nS
Capacitance	V_R=0V, f=1MHz	C_T		2.2	4	pF

CHARACTERISTIC CURVES

Fig.1 Forward Characteristics

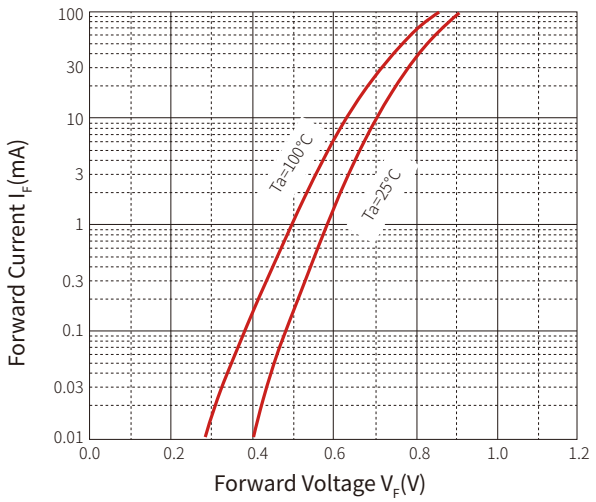


Fig.2 Reverse Characteristics

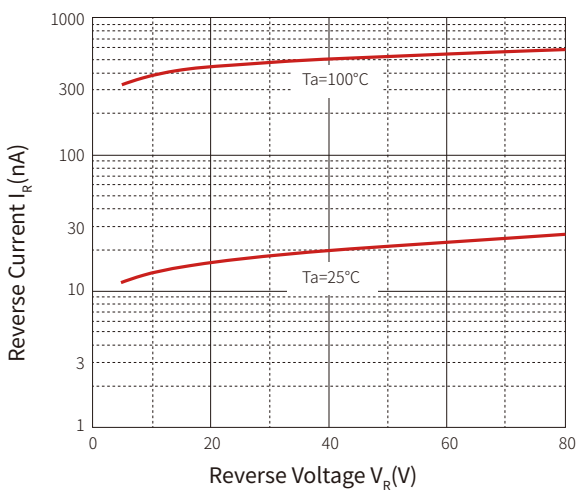


Fig.3 Capacitance Characteristics

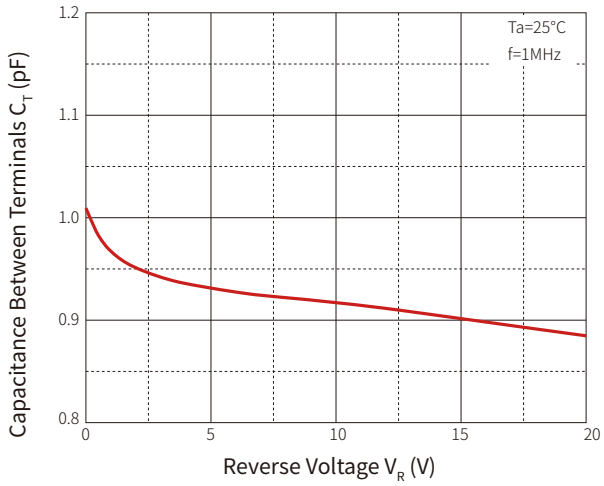
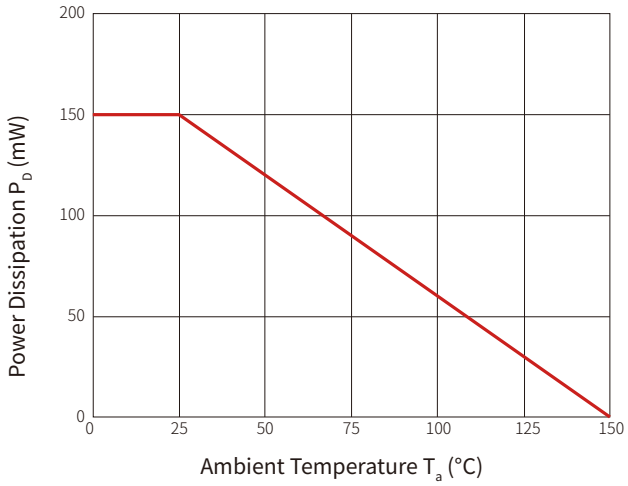
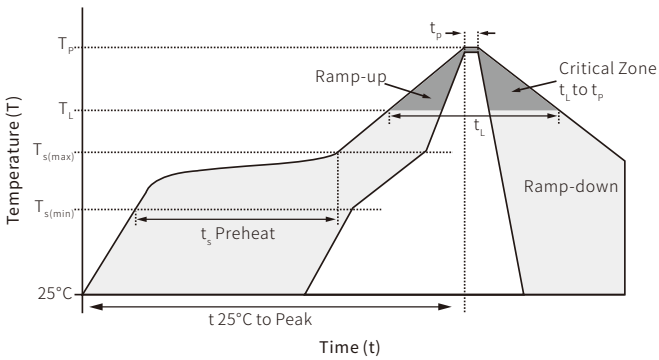


Fig.4 Power Derating Curve

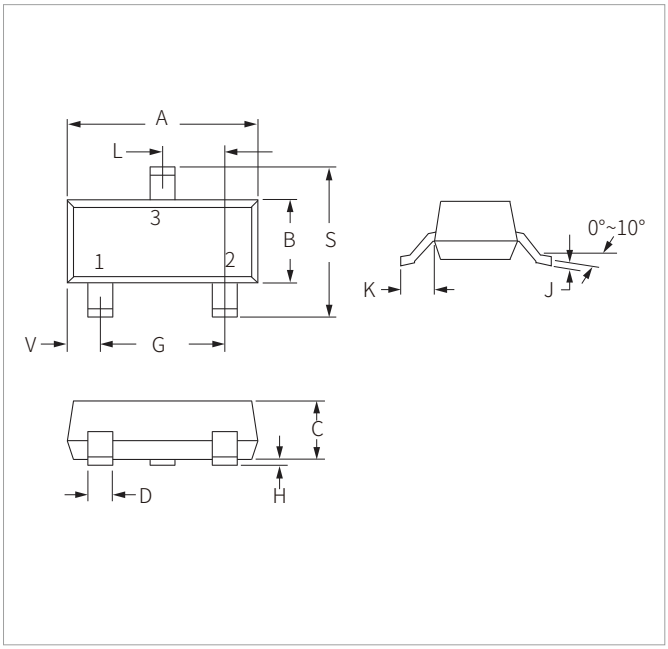


SOLDERING PARAMETERS

Reflow Condition		Lead–free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	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 (T_p)		8 minutes max.
Do not exceed		260°C

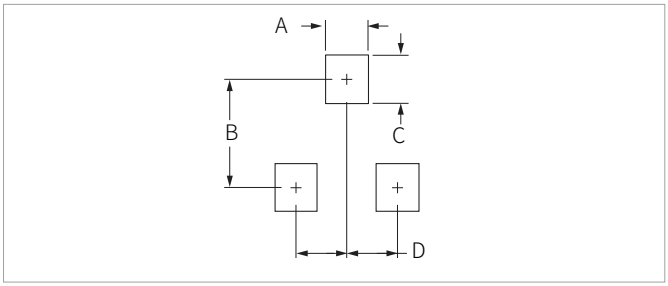


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
1SS181	SOT-23	3000PCS	7”

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