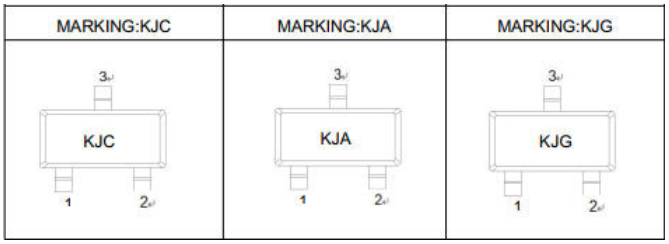
Switching Diode

Features

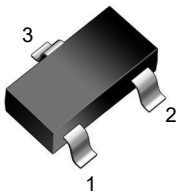
- Fast Switching Device (TRR <4nS)
- Power Dissipation of 225mW
- Low reverse leakage
- High stability and high reliability
- RoHS Compliant

RoHS
COMPLIANT

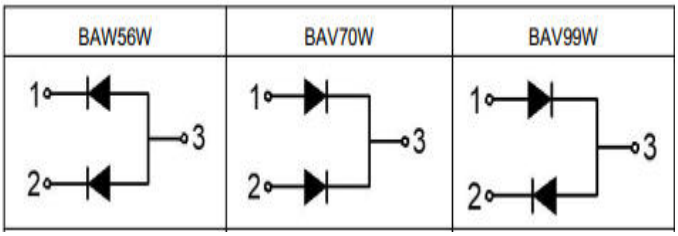
Marking: **SOT-323**



Pin definition



Epuivalent circuit



Applications

- Surge protection
- Voltage stabilization
- Polarity Protection

Mechanical Data

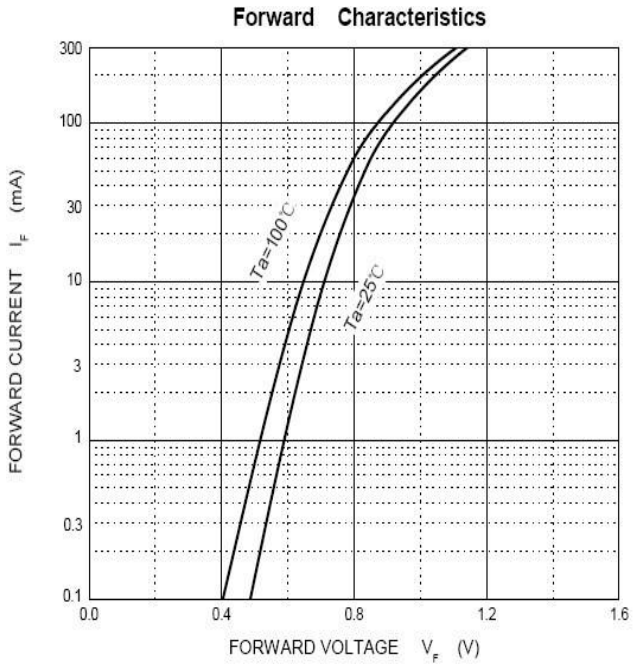
- Package: SOT-323
- Lead Finish:Matte Tin
- Case Material: “Green” Molding Compound
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020

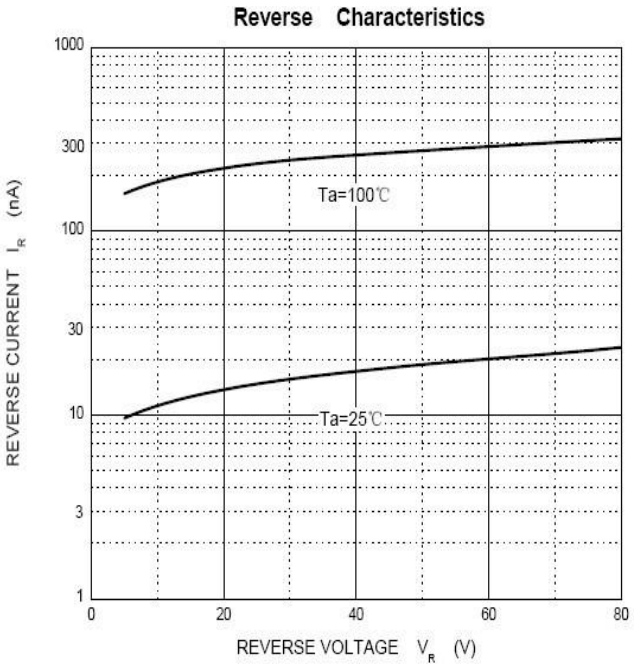
Absolute Maximum Ratings (T_A=25℃ unless otherwise noted)			
Parameter	**Symbol**	**Value**	**Unit**
Reverse Voltage	V_R	75	V
Power Dissipation	P_D	225	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	℃/W
Average Rectified Current	I_O	200	mA
Non-repetitive Peak Forward Current	I_{FM}	400	mA
PeakForwardSurgeCurrent@tp=1ms; TA=25℃	I_{FSM}	2.0	A
Operating Junction temperature Range	T_J	-55 to +150	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃

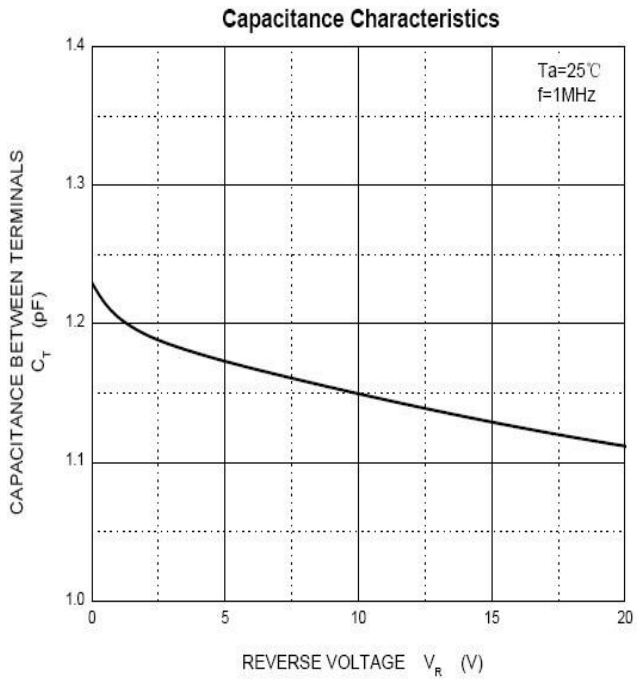
Electrical Specifications (T_A=25℃ unless otherwise noted)					
Parameter	**Symbol**	**Test Conditions**	**Limits**		**Unit**
			Min	**Max**	
Reverse Breakdown Voltage	V_{BR}	IR=100uA	75		V
Reverse Leakage Current	I_R	VR = 75V		2.5	uA
Forward Voltage	V_F	IF=1mA		0.715	V
		IF=10mA		0.855	V
		IF=50mA		1.000	V
		IF=150mA		1.250	V
Reverse Recovery Time	t_{rr}	IR=10mA,RL=100Ω IRR=0.1xIR		4	nS
Junction Capacitance	C_J	VR = 0V, f = 1MHz		1.5	pF

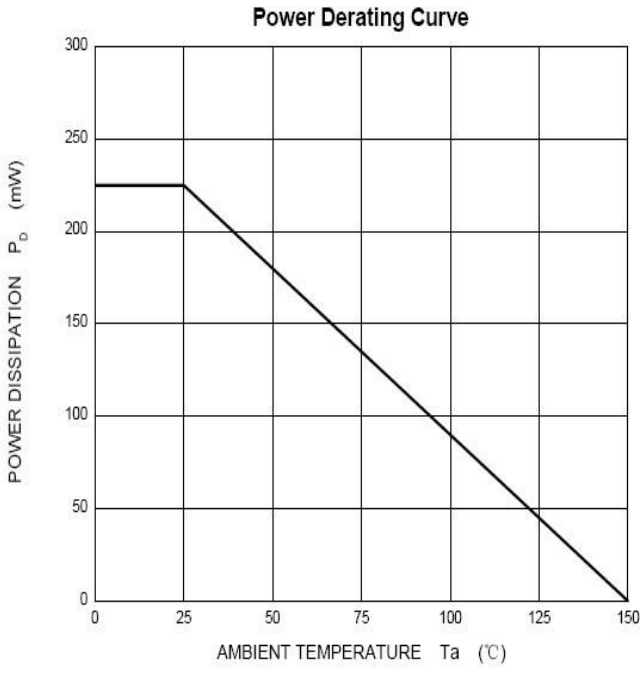
Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)



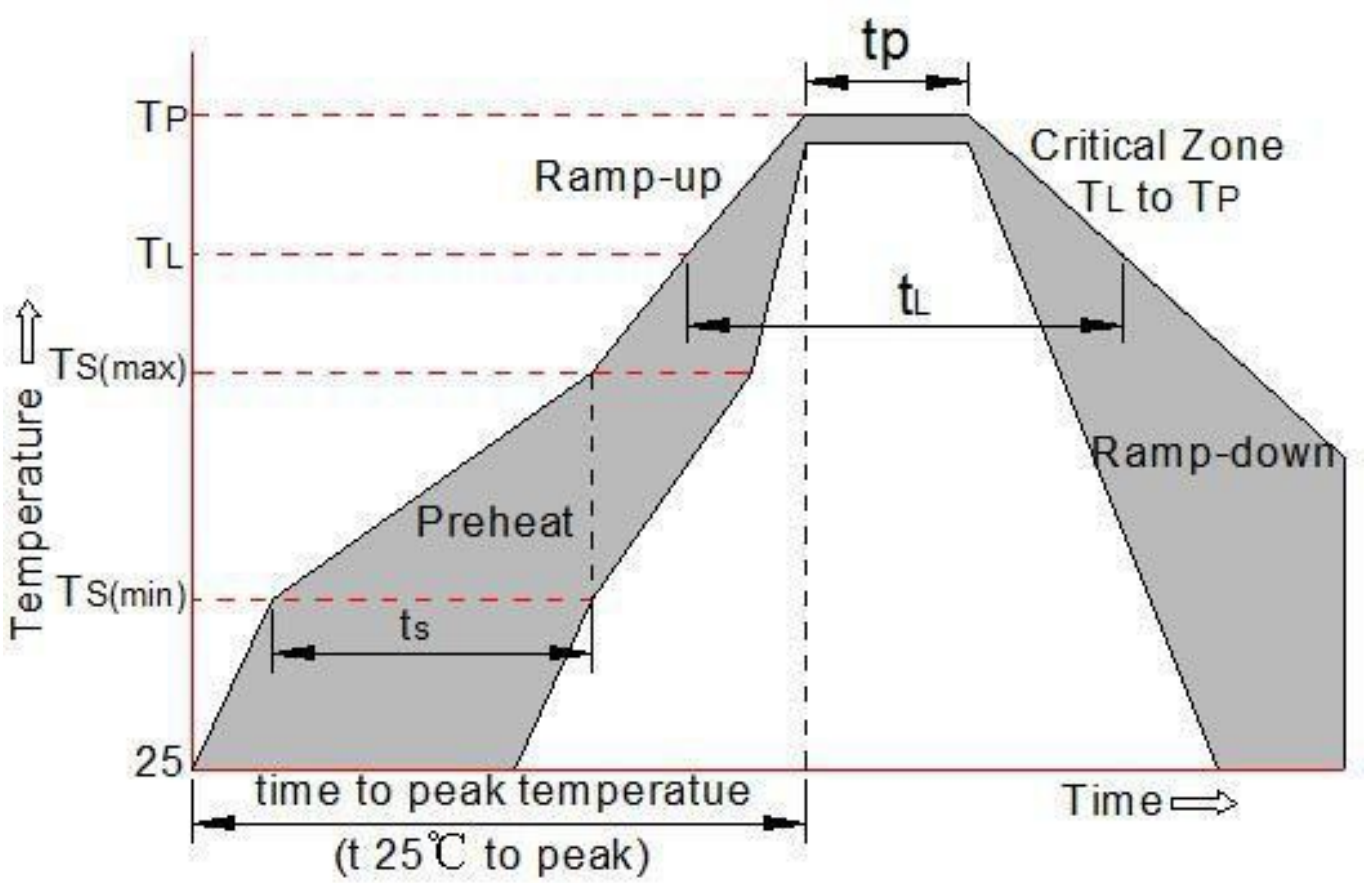






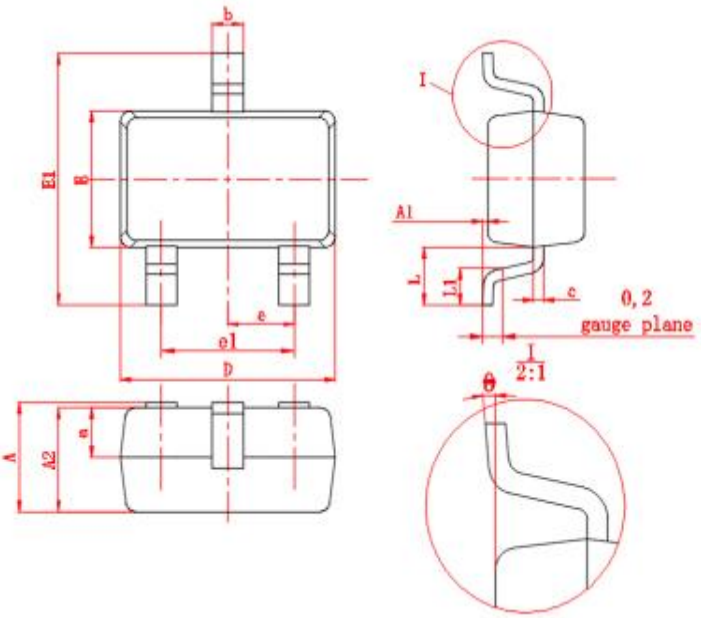
Soldering Parameters

Reflow Condition		Pb -Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 ℃
	-Temperature Max($T_{s(max)}$)	+200 ℃
	-Time (Min to Max) (ts)	60 -180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 ℃ /sec. Max
$T_{s(max)}$ to T_L - Ramp -up Rate		3 ℃ /sec. Max
Reflow	-Temperature(T_L) (Liquid us)	+217 ℃
	-Temperature(t_L)	60 -150 secs.
Peak Temp (T_p)		+260(+0/ -5) ℃
Time within 5 ℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp -down Rate		6 ℃ /sec. Max
Time 25 ℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 ℃



Package Outline Dimensions

(Unit: millimeters)



Symbol	Millimeters	
	min	max
A	0.9	1.1
A1	0	0.1
A2	0.9	1.0
a	(0.45)	
D	2.0	2.2
E	1.15	1.35
E1	2.15	2.45
e	(0.65)	
e1	1.2	1.4
b	0.25	0.35
c	0.08	0.15
L	(0.525)	
L1	0.26	0.46
θ	0°	8°

Revision History

Document Version	Date of release	Description of changes
Rev.A	2017.06.13	First issue

Disclaimers

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd.or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page.
(http://www.goodark.com)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.