

Switching Diode

Features

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

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

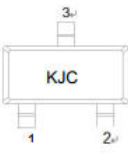

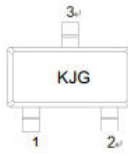


RoHS
COMPLIANT

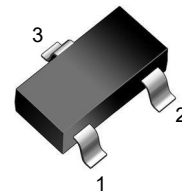


Marking:

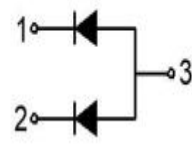
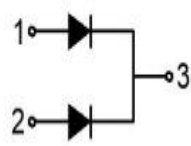
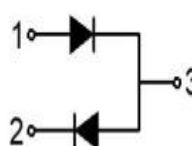
SOT-323

MARKING:KJC	MARKING:KJA	MARKING:KJG
		

Pin definition



Equivalent circuit

BAW56W	BAV70W	BAV99W
		

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

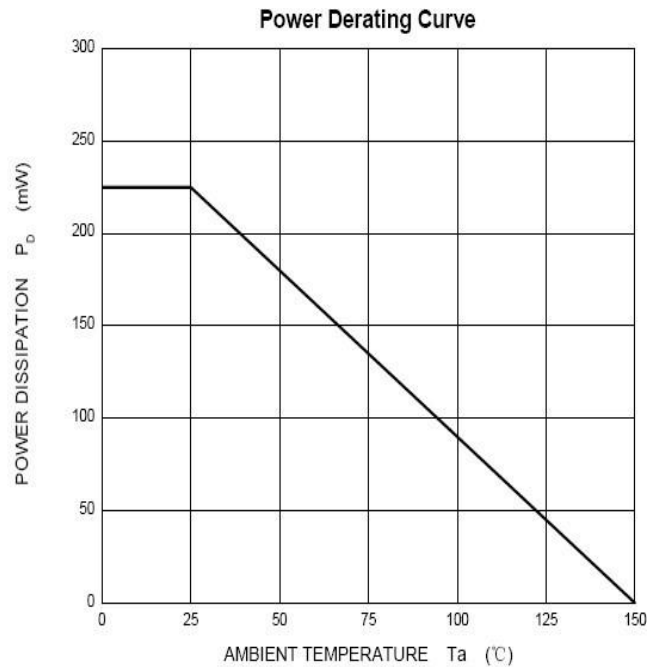
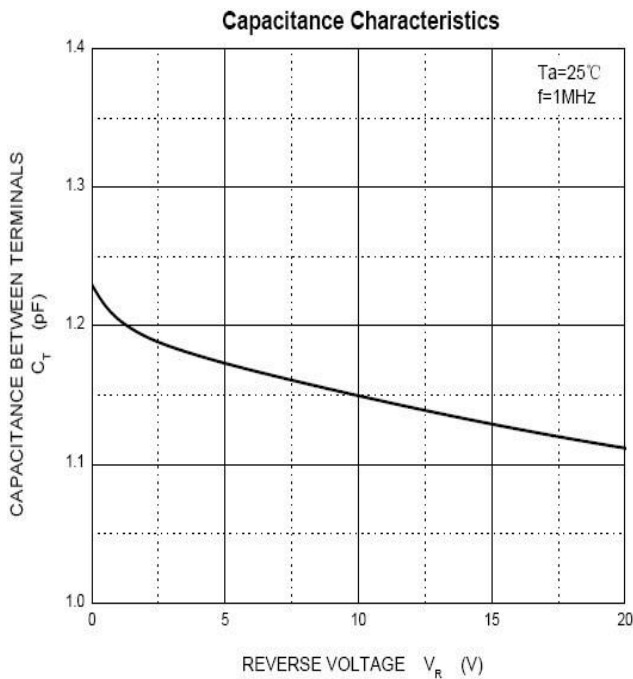
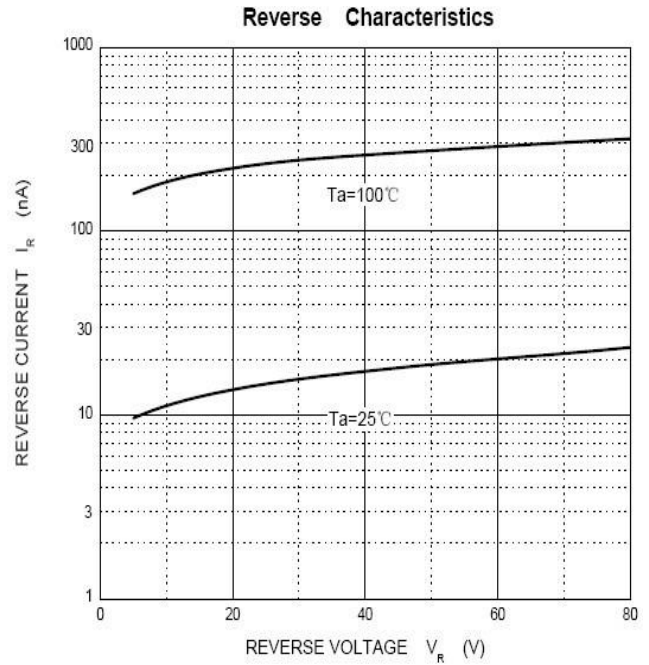
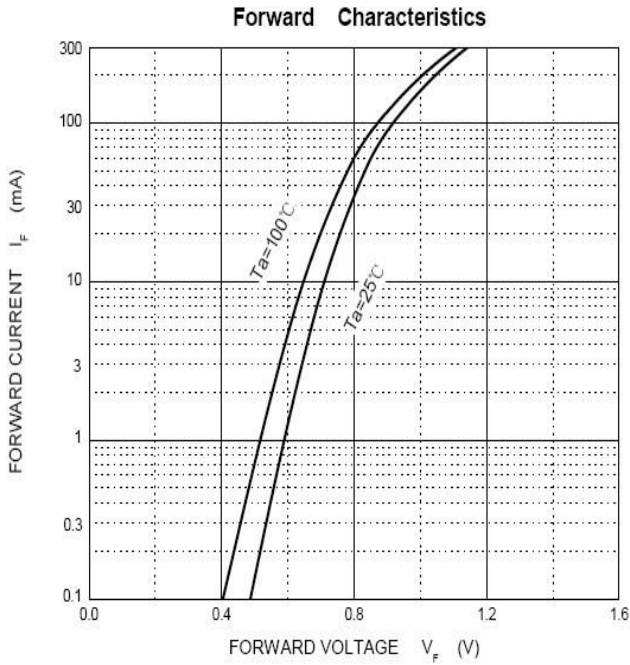
Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	75	V
Power Dissipation	P_D	225	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	°C/W
Average Rectified Current	I_O	200	mA
Non-repetitive Peak Forward Current	I_{FM}	400	mA
Peak Forward Surge Current @ tp=1ms; TA=25°C	I_{FSM}	2.0	A
Operating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

Electrical Specifications (TA=25°C 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

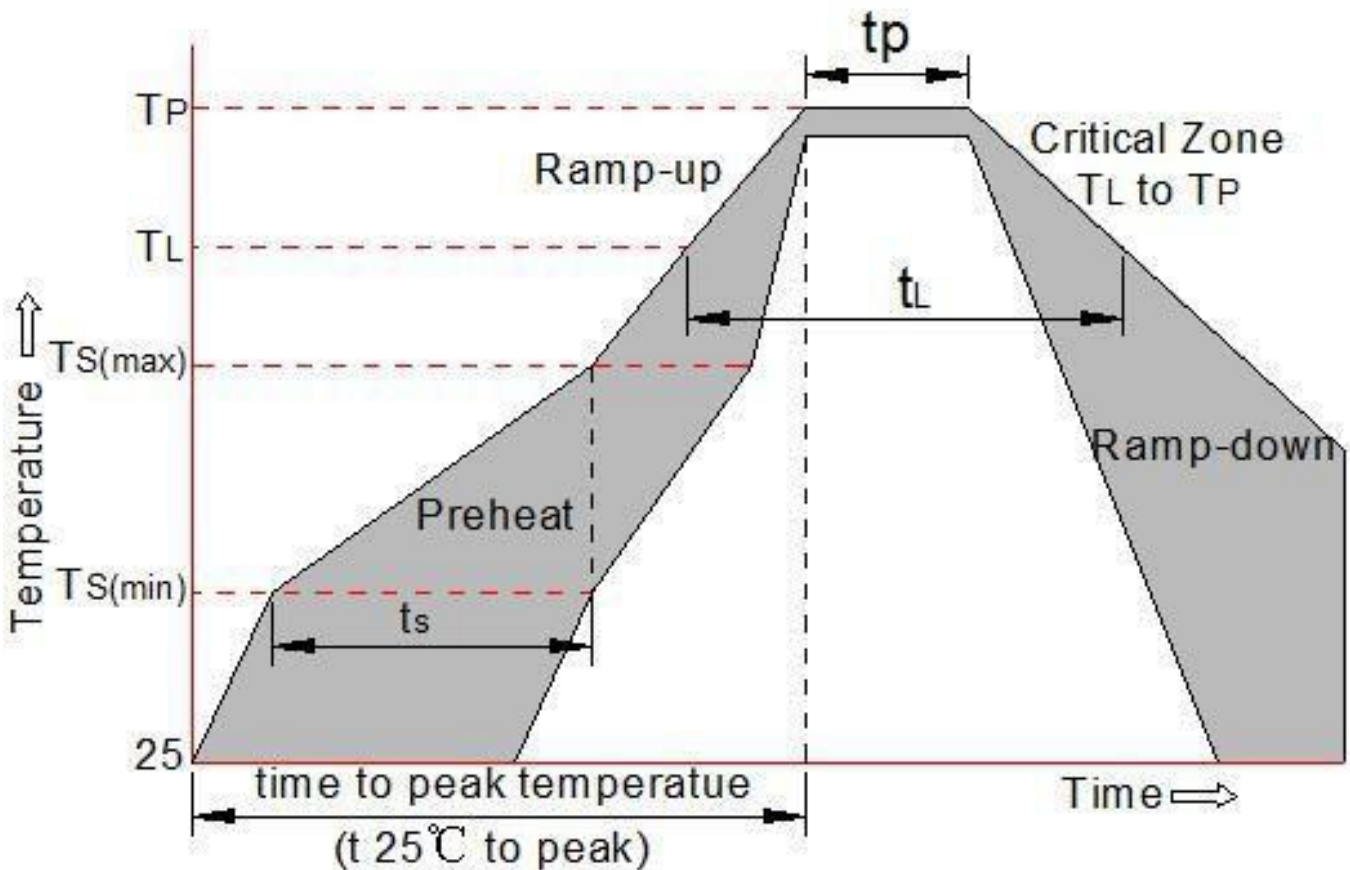
Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)



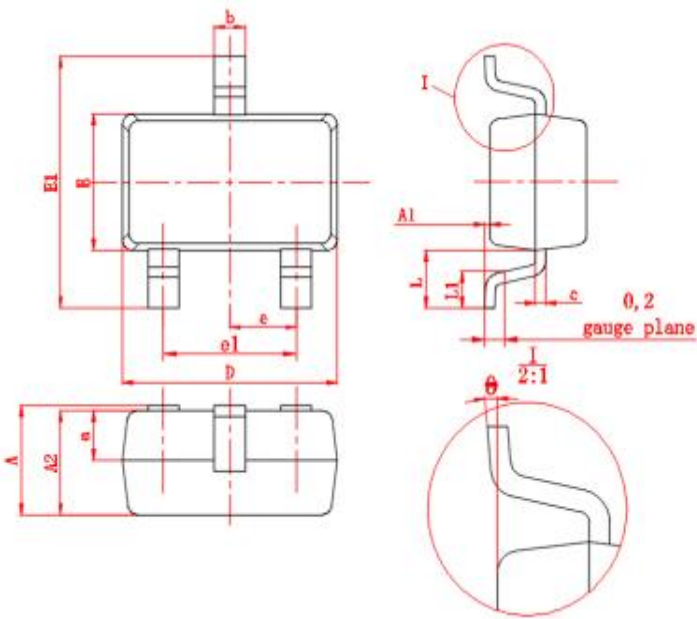
Soldering Parameters

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



Package Outline Dimensions

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

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