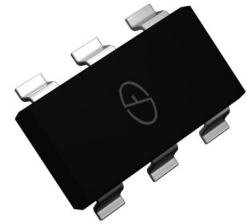


## Switching Diode

### Features

- Fast Switching Device (TRR <4nS)
- Power Dissipation of 200mW
- Low reverse leakage
- High Stability and High Reliability
- RoHS Compliant



Marking: .KA2

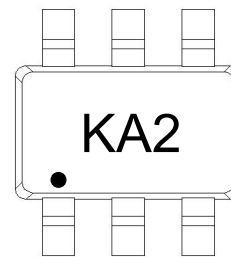
SOT-363

### Applications

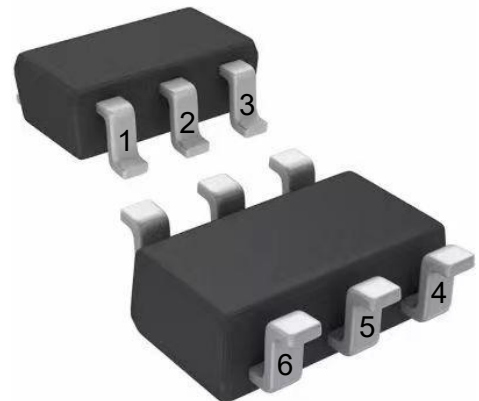
- High speed switching

### Mechanical Data

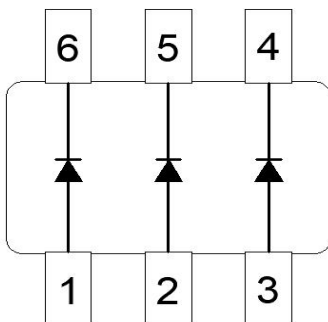
- Package: SOT-363
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Tape Reel :3000pcs



### Pin definition



### Epuivalent circuit



### Maximum Ratings & Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

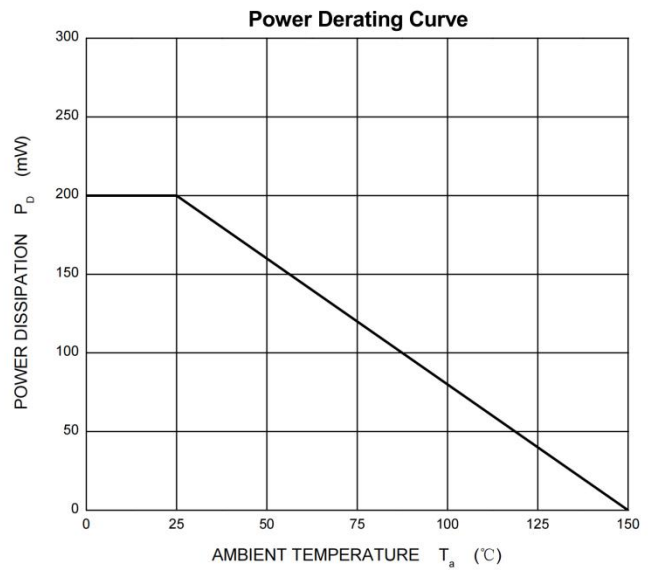
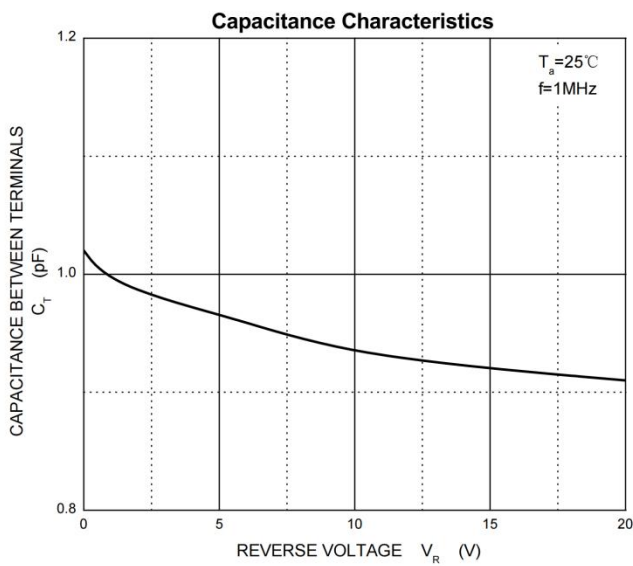
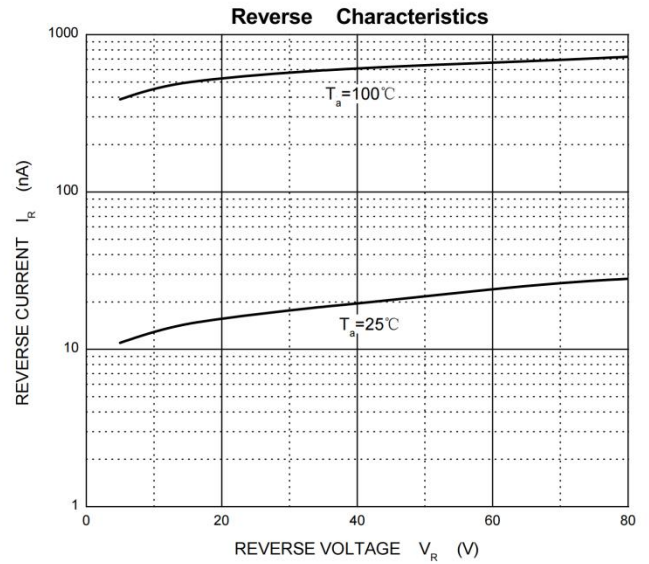
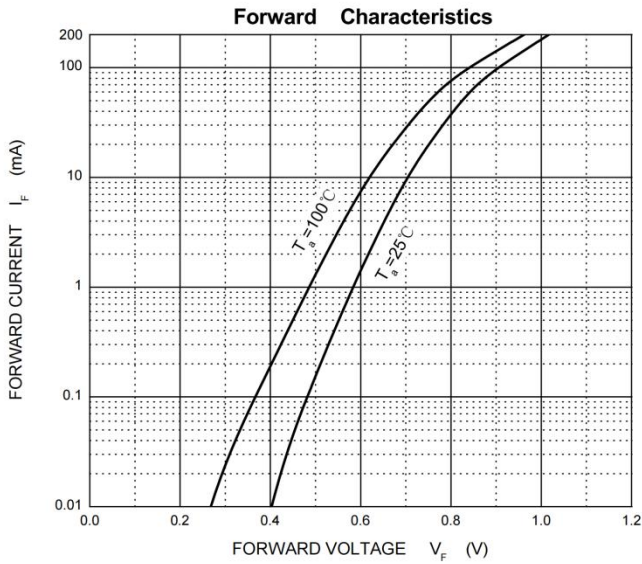
Parameter	Symbol	Value	Unit
Peak reverse voltage	V <sub>RM</sub>	100	V
Continuous Reverse voltage	V <sub>R</sub>	75	V
Average rectified output current	I <sub>O</sub>	150	mA
Non-repetitive Peak Forward Current	I <sub>FM</sub>	300	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms	I <sub>FSM</sub>	2	A
Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	625	°C/W
Junction temperature Range	T <sub>J</sub>	-55 ~ +150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ +150	°C

### Electrical Specifications (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> = 100μA	100		V
		I <sub>R</sub> = 5μA	75		V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 20V		25	nA
		V <sub>R</sub> = 75V		1	uA
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 1.0mA		0.715	V
		I <sub>F</sub> = 10mA		0.855	V
		I <sub>F</sub> = 50mA		1	V
		I <sub>F</sub> = 150mA		1.25	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0, f = 1.0MHz		2	pF
Reverse Recovery Time	T <sub>RR</sub>	I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>tr</sub> = 0.1 × I <sub>R</sub> , R <sub>L</sub> = 100 Ω		4	ns

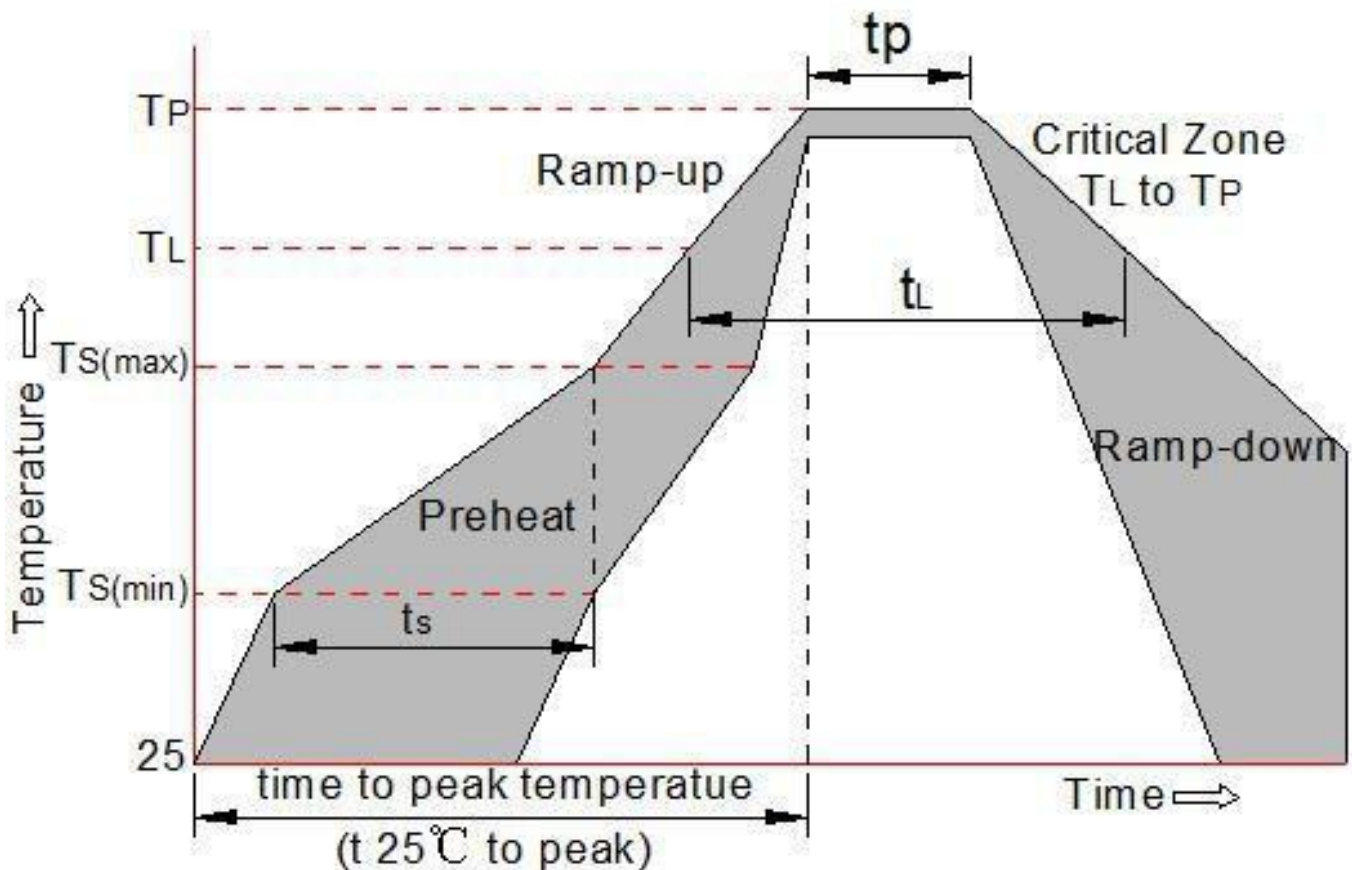
## Ratings and Characteristics Curves

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



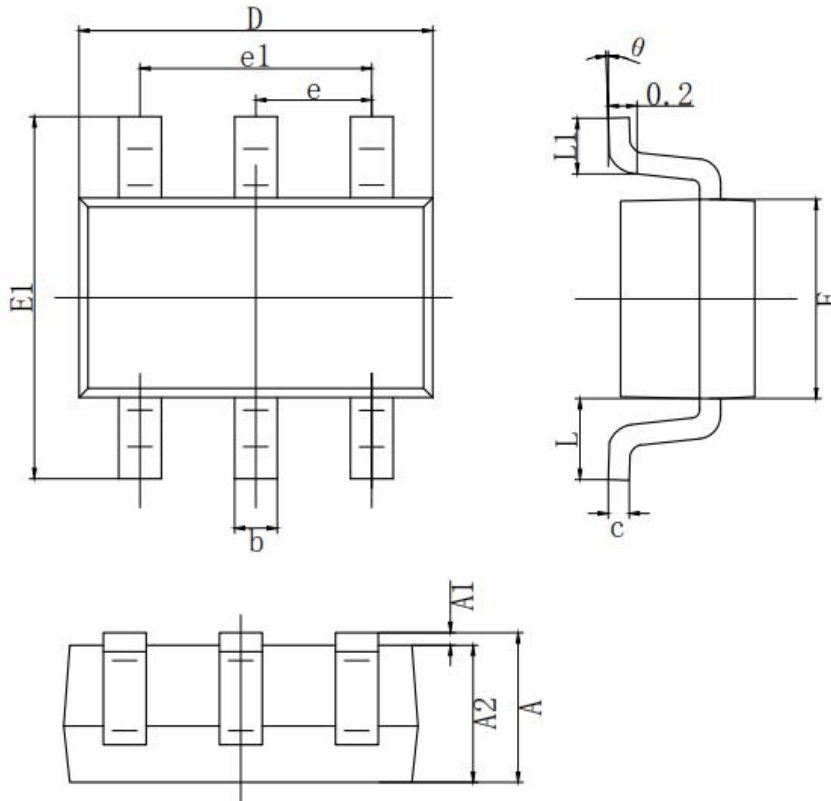
## Soldering Parameters

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
$T_{s(max)}$ to $T_L$ - 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

in inches (millimeters)



SYMBOL	MILLIMETER	
	MIN	MAX
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
θ	0°	8°

## Revision History

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

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