



Features

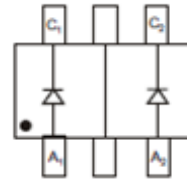
- Fast switching
- Low forward voltage drop
- Ultra-small surface mount package
- PN junction guard ring for transient and ESD protection

Applications

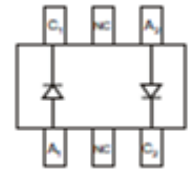
- High speed switching application

Mechanical Data

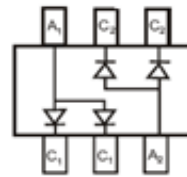
- Case: SOT-363
- Molding compound: UL flammability classification rating 94-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



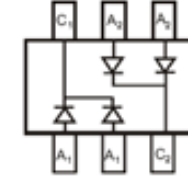
BAT54JW



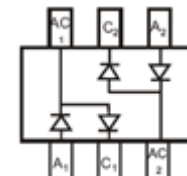
BAT54DW



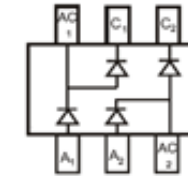
BAT54ADW



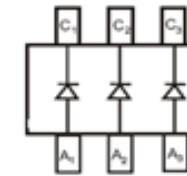
BAT54CDW



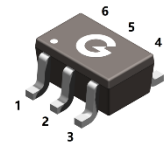
BAT54SDW



BAT54BRW



BAT54TW



SOT-363

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAT54JW	SOT-363	3000 pcs / Tape & Reel	KLC
BAT54DW	SOT-363	3000 pcs / Tape & Reel	KLD
BAT54ADW	SOT-363	3000 pcs / Tape & Reel	KL6
BAT54CDW	SOT-363	3000 pcs / Tape & Reel	KL7
BAT54SDW	SOT-363	3000 pcs / Tape & Reel	KL8
BAT54BRW	SOT-363	3000 pcs / Tape & Reel	KLB
BAT54TW	SOT-363	3000 pcs / Tape & Reel	KLA



Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	30	V
Working Peak Reverse Voltage	V _{RWM}	30	V
DC Reverse Voltage	V _R	30	V
Forward Continuous Current	I _F	200	mA
Repetitive Peak Forward Current	I _{FRM}	300	mA
Forward Surge Current @ t _p < 1s	I _{FSM}	600	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *1	P _D	200	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	500	°C/W
Operating junction Temperature	T _J	-55 ~ +125	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V _(BR)	I _R = 100μA	30	-	-	V
Forward Voltage *2	V _F	I _F = 0.1mA	-	-	0.24	V
		I _F = 1mA	-	-	0.32	V
		I _F = 10mA	-	-	0.40	V
		I _F = 30mA	-	-	0.50	V
		I _F = 100mA	-	-	0.80	V
Maximum Peak Reverse Current *3	I _R	V _R = 25V	-	-	2	μA
Capacitance Between Terminals	C _T	V _R = 1V, f = 1MHz	-	-	10	pF
Reverse Recovery Time	t _{rr}	I _F = I _R = 10mA I _{rr} = 0.1*I _R , R _L = 100Ω	-	-	5	ns

Notes:

1. The data tested by surface mounted on FR-4 board with recommended pad layout
2. pulse test, t_p ≤ 300μs
3. pulse test, t_p ≤ 5ms



Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

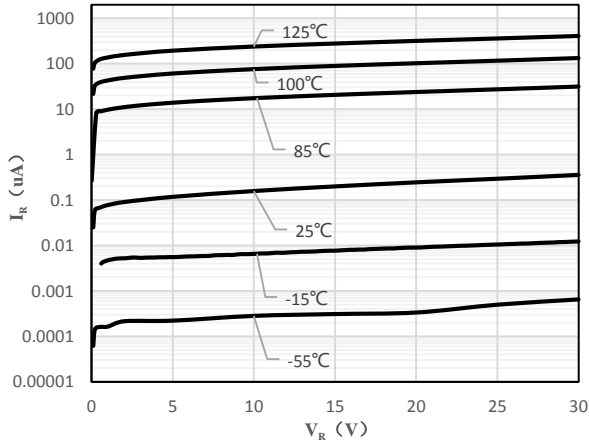


Fig 1 Typical Reverse Characteristic

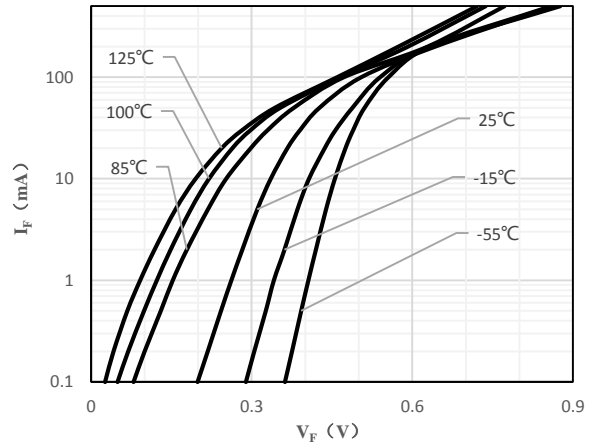


Fig 2 Typical Forward Characteristics

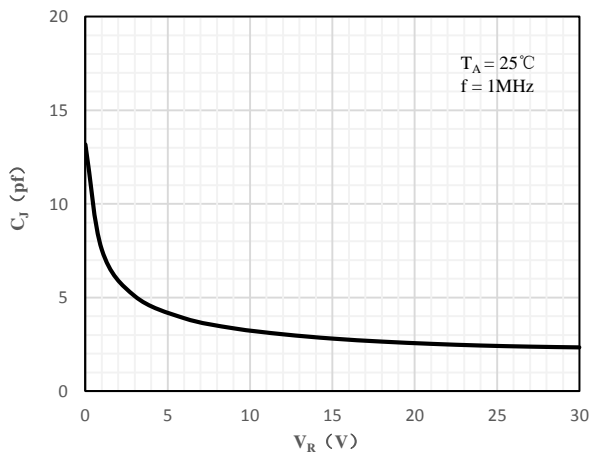


Fig 3 Capacitance vs. Reverse Voltage

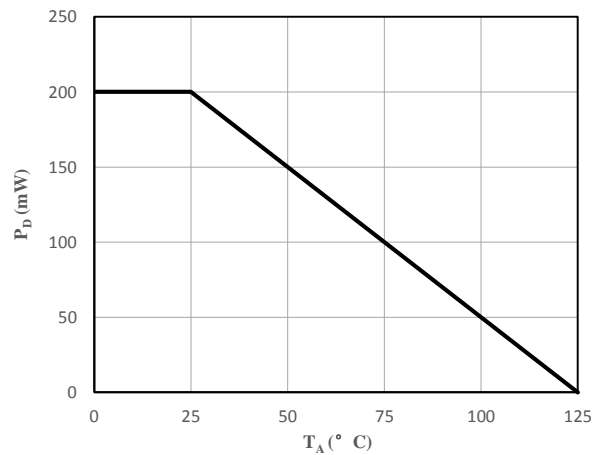
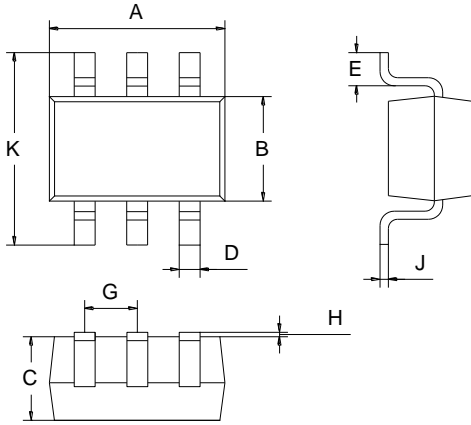


Fig 4 Power Derating Curve



Package Outline Dimensions (Unit: mm)



SOT-363		
Dimension	Min.	Max.
A	2.00	2.20
B	1.15	1.35
C	0.85	1.05
D	0.15	0.35
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Package Outline Dimensions (Unit: mm)

SOT-363

