

### Features

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

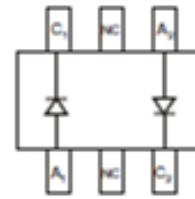
HF

### Typical Applications

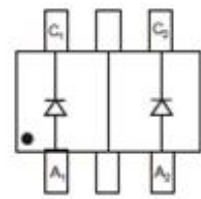
- High speed switching application

### Mechanical Data

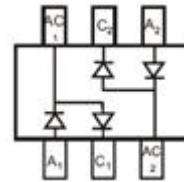
- Case: SOT-363
- Terminals: solderable per MIL-STD-202, Method 208



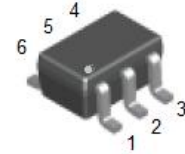
BAT54DW



BAT54JW



BAT54XY



SOT-363

### Ordering Information

Part Number	Package	Shipping	Marking Code
BAT54DW	SOT-363	3000 pcs / Tape & Reel	KLD
BAT54JW	SOT-363	3000 pcs / Tape & Reel	KLC
BAT54XY	SOT-363	3000 pcs / Tape & Reel	C5

### Maximum Ratings (@T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Limits	Unit
Peak Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	30	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Reverse Voltage	V <sub>R</sub>		
Forward Continuous Current	I <sub>F</sub>	200	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	300	mA
Forward Surge Current@tp<1s	I <sub>FSM</sub>	600	mA
Power Dissipation *	P <sub>D</sub>	200	mW

\* part mounted on FR-4 board with recommended pad layout

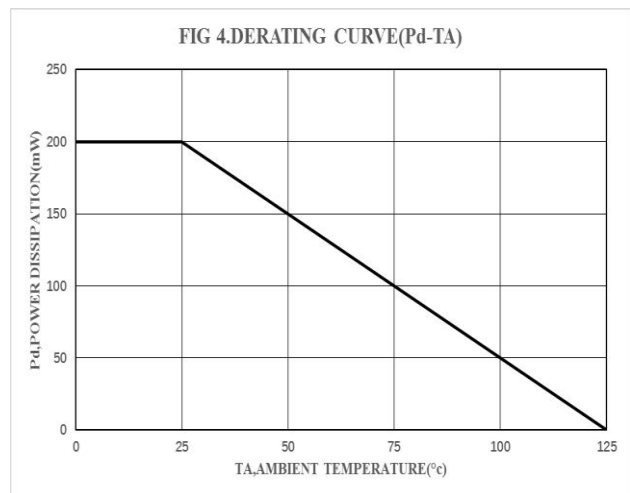
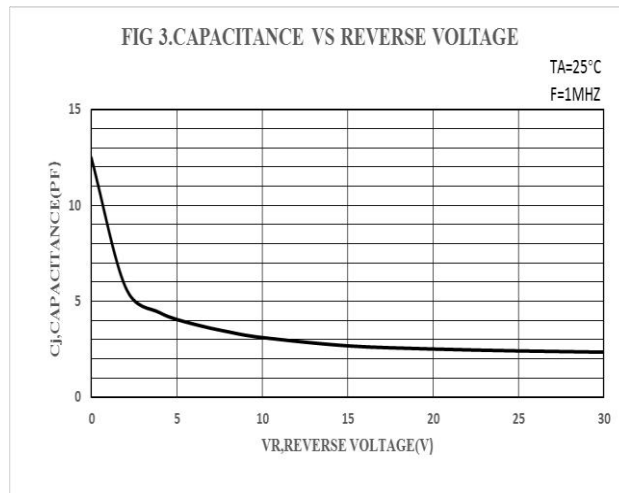
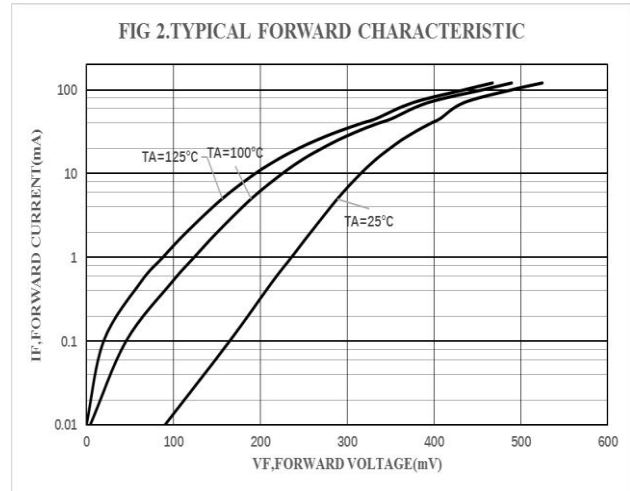
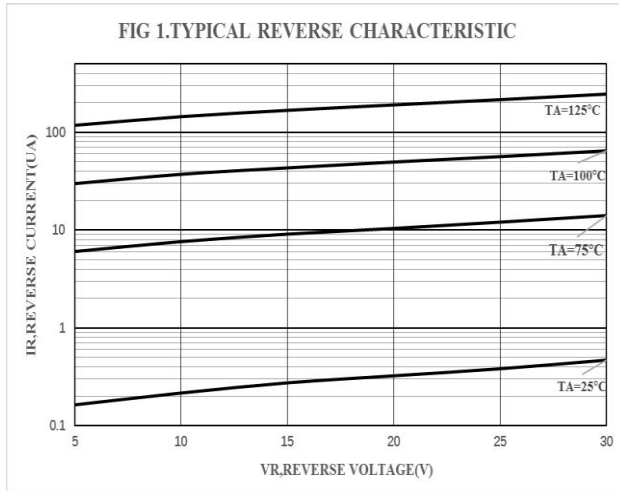
### Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	$^{\circ}C/W$
Junction Temperature	$T_J$	-55 ~ +125	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 ~ +150	$^{\circ}C$

### Electrical Characteristics (@ $T_A=25^{\circ}C$ unless otherwise specified)

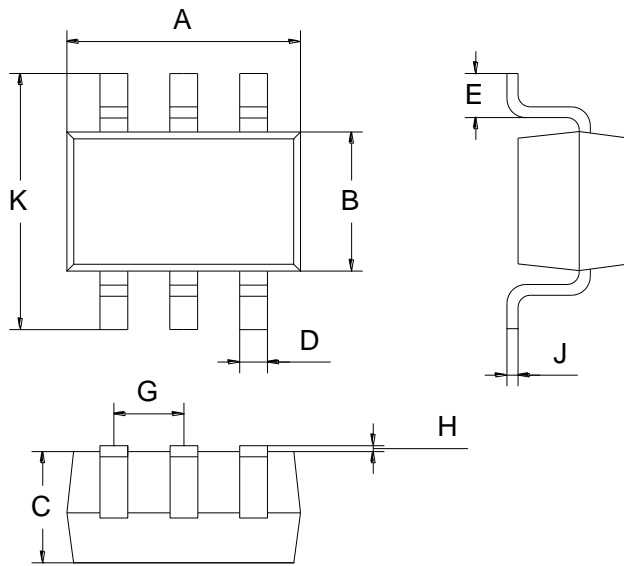
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu A$	30			V
Forward Voltage *1	$V_F$	$I_F=0.1mA$			0.24	V
		$I_F=1mA$			0.32	V
		$I_F=10mA$			0.40	V
		$I_F=30mA$			0.50	V
		$I_F=100mA$			0.80	V
Reverse Current *2	$I_R$	$V_R=25V$			2	$\mu A$
Capacitance Between Terminals	$C_T$	$V_R=1V, f=1MHz$			10	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10mA$ $I_{rr}=0.1X I_R, R_L=100\Omega$			5	ns
*1: pulse test, $t_p \leq 300\mu s$						
*2: pulse test, $t_p \leq 5ms$						

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



**Package Outline Dimensions**(unit:mm)

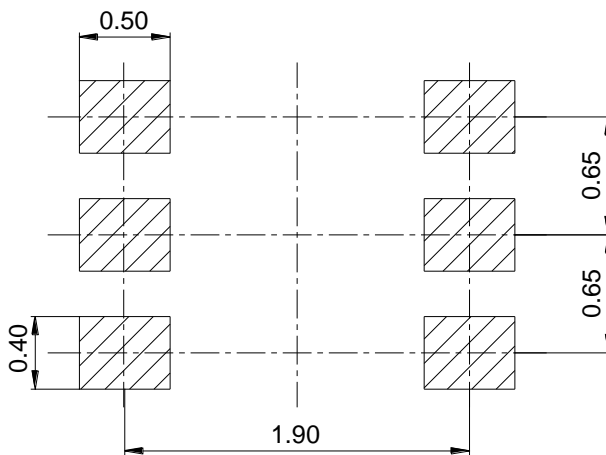
**SOT-363**



SOT-363		
Dim	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

**Mounting Pad Layout**(unit:mm)

**SOT-363**



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