



## Small Signal Schottky Diode



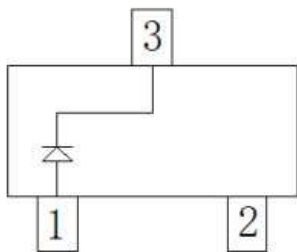
**SOT-323**

### Features

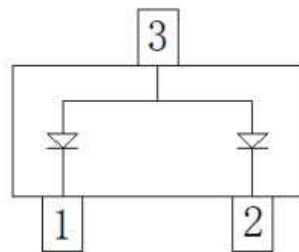
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Low Forward Voltage Schottky Rectifier
- $V_{RRM}$  30V
- $I_{FAV}$  200mA
- Part no. with suffix "Q" means AEC-Q101 qualified

### Mechanical Data

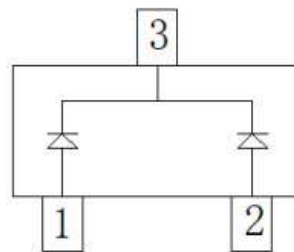
- **Case:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102



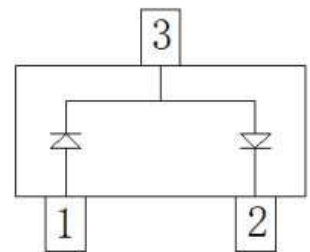
BAT54WTQ  
Marking:KL5



BAT54AWTQ  
Marking:KL6



BAT54CWTQ  
Marking:KL7



BAT54SWTQ  
Marking:KL8

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Peak Repetitive Reverse Voltage	$V_{RRM}$	V		30
Average Forward Current	$I_{FAV}$	mA		200
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	A	square wave $t_p < 10\text{ms}$	3
Power Dissipation	$P_D$	mW		200
Thermal Resistance Junction to Ambient	$R_{thJA}$	$^\circ\text{C/W}$		500
Junction Temperature	$T_j$	$^\circ\text{C}$		-55 to +125
Storage Temperature Range	$T_{stg}$	$^\circ\text{C}$		-55 to +150



# BAT54WTQ&BAT54AWTQ&BAT54CWTQ&BAT54SWTQ

## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	MAX
Forward Voltage	V <sub>F</sub>	V	I <sub>F</sub> =0.1mA		0.24
			I <sub>F</sub> =1mA		0.32
			I <sub>F</sub> =10mA		0.4
			I <sub>F</sub> =30mA		0.5
			I <sub>F</sub> =100mA		1
Reverse Current	I <sub>R</sub>	μA	V <sub>R</sub> =25V		2
Reverse Breakdown Voltage	V <sub>BR</sub>	V	I <sub>R</sub> =10μA	30	
Junction Capacitance	C <sub>J</sub>	pF	V <sub>R</sub> =1V, f =1MHz		10
Reverse Recovery Time	t <sub>rr</sub>	ns	I <sub>F</sub> =I <sub>R</sub> =10mA, I <sub>rr</sub> =1mA, R <sub>L</sub> =100Ω		5

## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAT54WTQ BAT54AWTQ BAT54CWTQ BAT54SWTQ	F2	Approximate 0.006	3000	30000	120000	7" reel



## ■ Characteristics (Typical)

Fig.1:  $P_D - T_A$

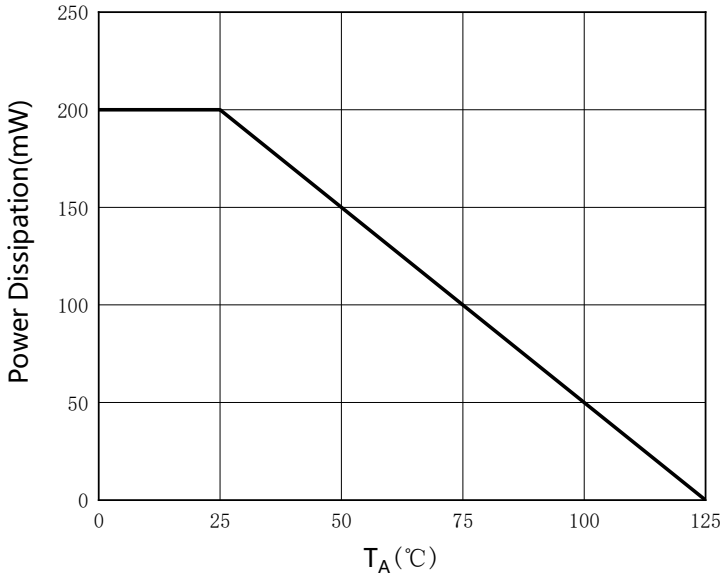


Fig.2: Capacitance Characteristics

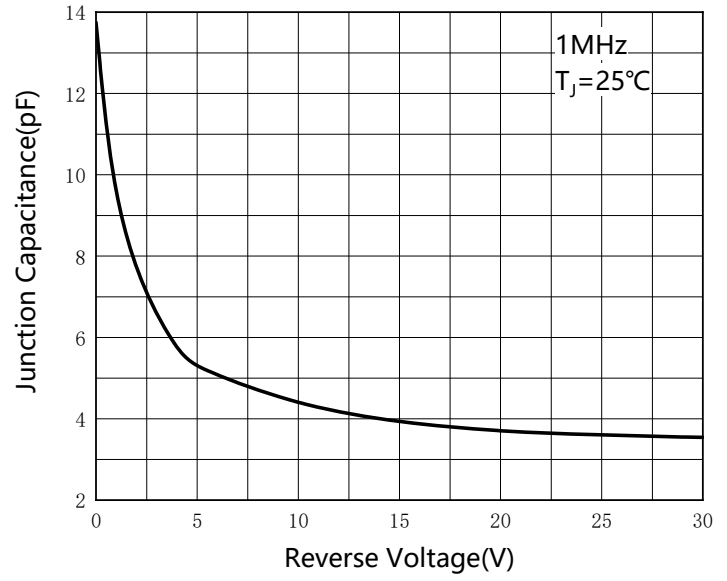


Fig.3: Forward Characteristics

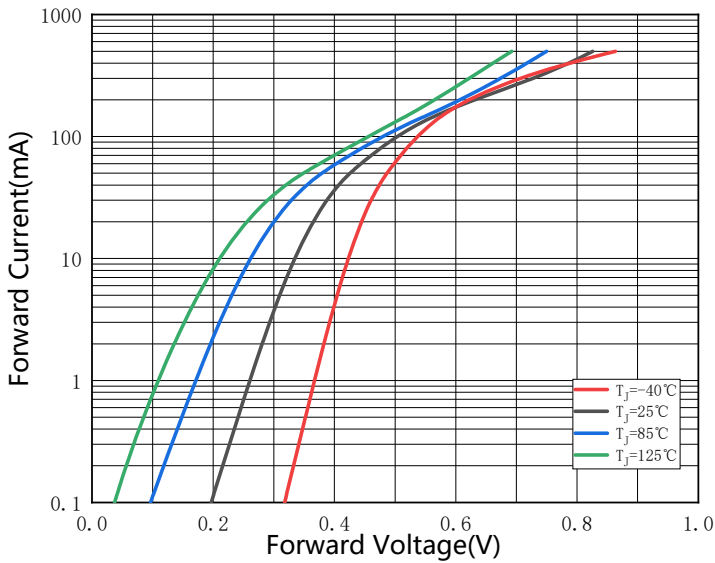
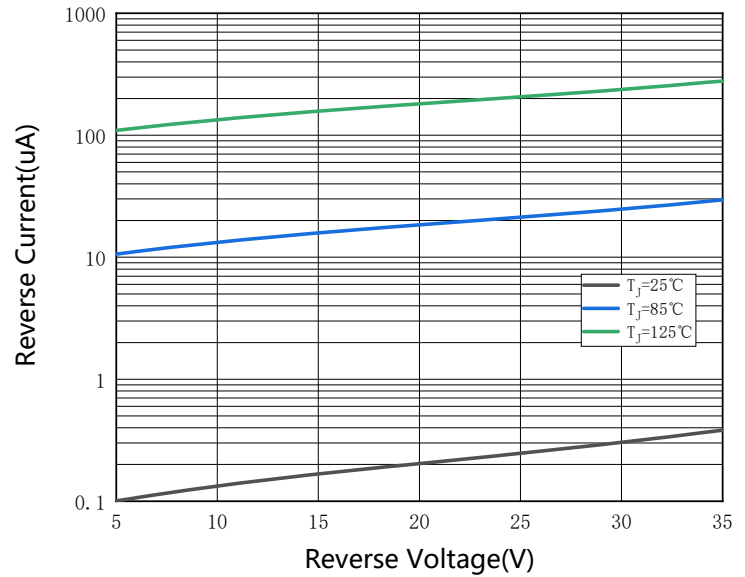
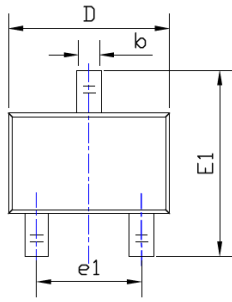


Fig.4: Reverse Characteristics

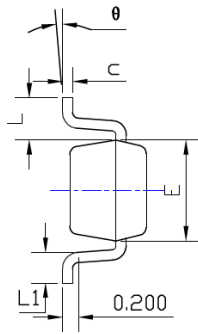




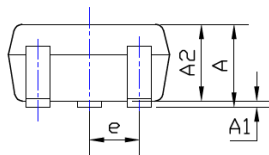
■ Outline Dimensions



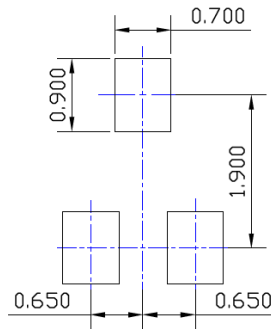
TOP VIEW



SIDE VIEW



SIDE VIEW



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026TYP		0.650TYP	
e1	0.047	0.055	1.200	1.400
L	0.021REF		0.525REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

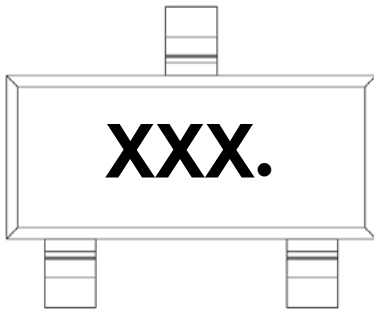
NOTE:

1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.

2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.

3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

■ Marking Information



PN	Marking Code
BAT54WTQ	KL5.
BAT54AWTQ	KL6.
BAT54CWTQ	KL7.
BAT54SWTQ	KL8.

Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. XXX is Marking Code
4. Body color: Black



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