



Small Signal Schottky Rectifier

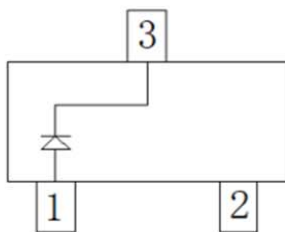
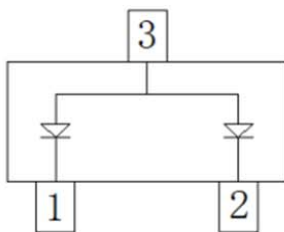
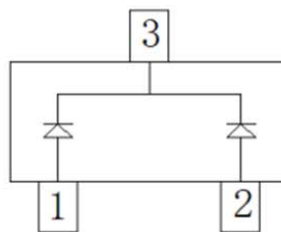
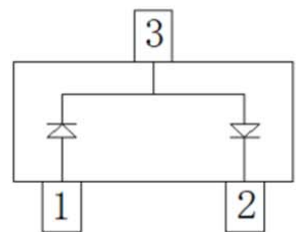
**SOT-23**

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-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

**BAT54LHQ****BAT54ALHQ****BAT54CLHQ****BAT54SLHQ**

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

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Repetitive Peak Reverse Voltage	V_{RRM}	V		30
Average Forward Current	I_{FAV}	mA		200
Peak Forward Surge Current	I_{FSM}	A	square wave $t_p < 10\text{ms}$	3
Power Dissipation	P_{tot}	mW		250
Thermal Resistance Junction to Ambient	R_{thJA}	$^{\circ}\text{C/W}$		500
Junction Temperature	T_j	$^{\circ}\text{C}$		-55 to +150
Storage Temperature Range	T_{stg}	$^{\circ}\text{C}$		-55 to +150



BAT54LHQ&BAT54ALHQ&BAT54CLHQ&BAT54SLHQ

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	MAX
Forward Voltage	V _F	V	I _F =0.1mA		0.24
			I _F =1mA		0.32
			I _F =10mA		0.4
			I _F =30mA		0.5
			I _F =100mA		0.8
Reverse Current	I _R	μA	V _R =25V		2
Breakdown Voltage	V _{BR}	V	I _R =10μA	35	
Junction Capacitance	C _J	pF	V _R =1V, f =1MHZ		10
Reverse Recovery Time	t _{rr}	ns	I _F =I _R =10mA, I _{rr} =1mA, R _L =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
BAT54LHQ BAT54ALHQ BAT54CLHQ BAT54SLHQ	F2	Approximate 0.01	3000	30000	120000	7" reel



■ Characteristics (Typical)

Fig.1: $P_D - T_A$

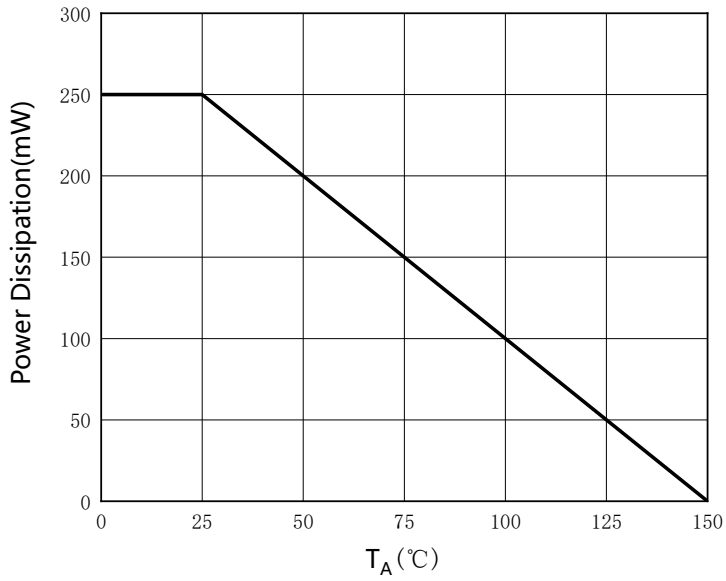


Fig.2: Capacitance Characteristics

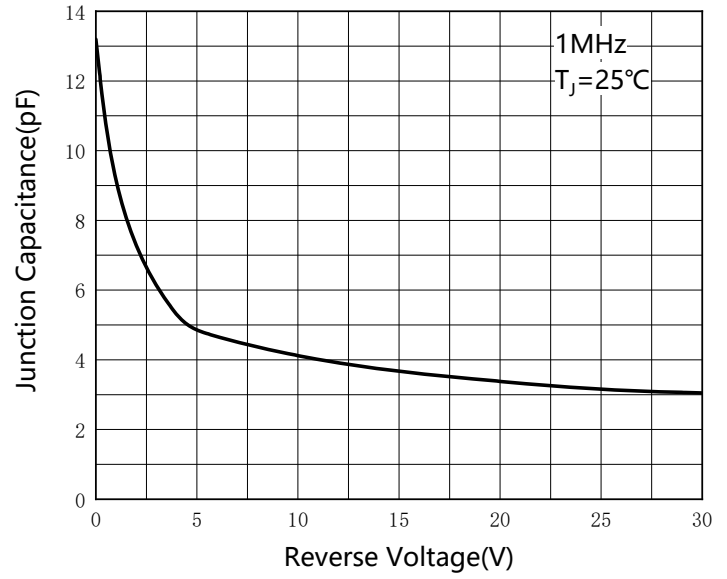


Fig.3: Forward Characteristics

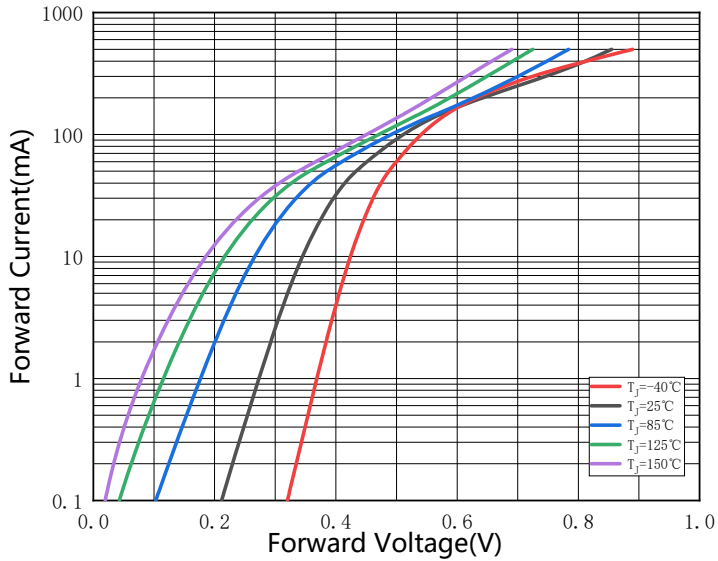
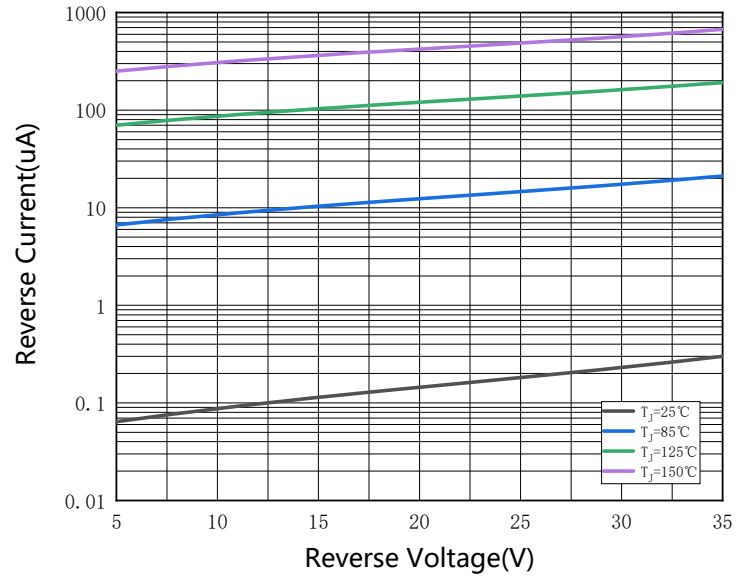
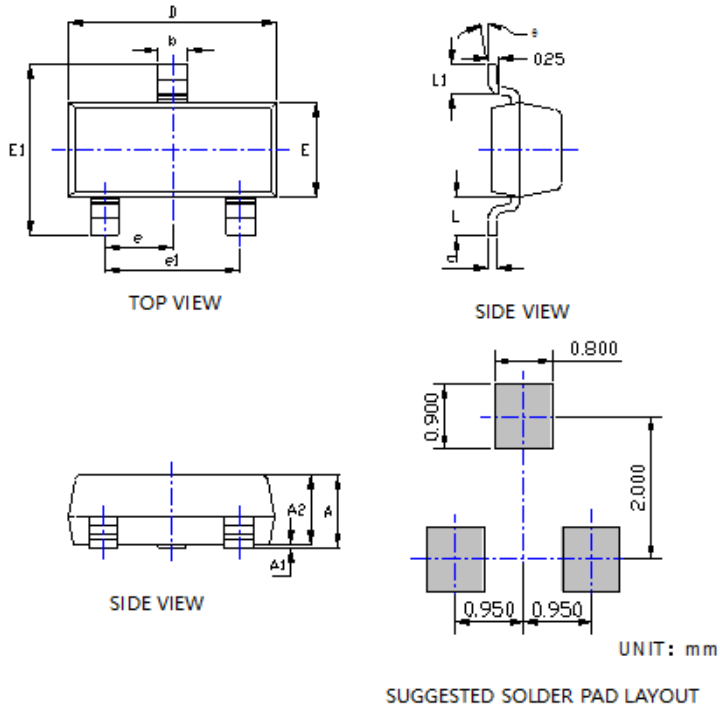


Fig.4: Reverse Characteristics





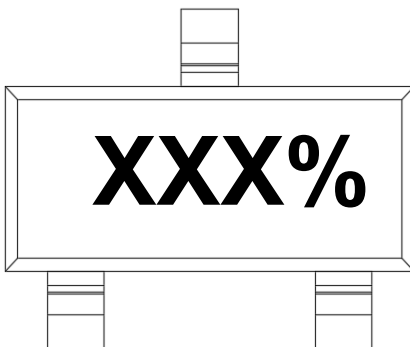
■ Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
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
BAT54LHQ	KL1%
BAT54ALHQ	KL2%
BAT54CLHQ	KL3%
BAT54SLHQ	KL4%

Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black
4. XXX% is Marking Code (%=placeholder for date code)

*Date Code vary depending upon production date.



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