



# BAT54x

**DIODE**

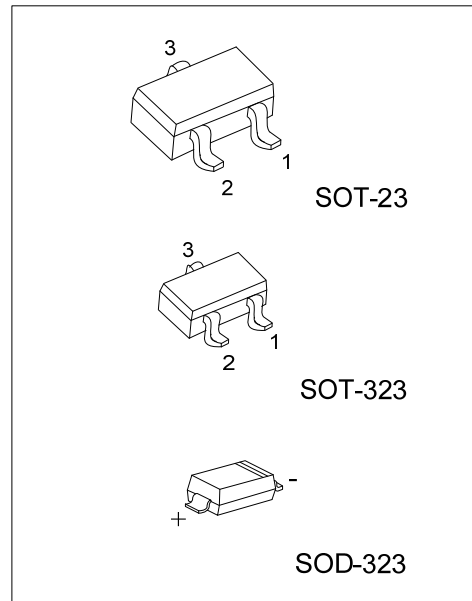
## SCHOTTKY BARRIER (DUAL) DIODES

■ DESCRIPTION

Planar Schottky barrier diodes encapsulated in the SOT-23, SOT-323 and SOD-323 small plastic SMD package. Single diodes and dual diodes with different pin configuration are available.

■ FEATURES

- \* Low forward voltage
- \* Guard ring protected
- \* Small plastic SMD package



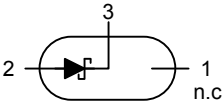
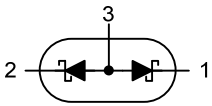
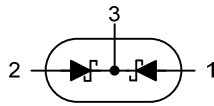
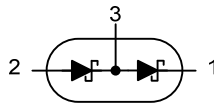
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BAT54L-AE3-R	BAT54G-AE3-R	SOT-23	x	A	K	Tape Reel
BAT54AL-AE3-R	BAT54AG-AE3-R	SOT-23	K1	K2	A2A1	Tape Reel
BAT54CL-AE3-R	BAT54CG-AE3-R	SOT-23	A1	A2	K2K1	Tape Reel
BAT54SL-AE3-R	BAT54SG-AE3-R	SOT-23	K1	A2	K2A1	Tape Reel
BAT54L-CB2-R	BAT54G-CB2-R	SOD-323	A	K	-	Tape Reel
BAT54L-AL3-R	BAT54G-AL3-R	SOT-323	x	A	K	Tape Reel
BAT54AL-AL3-R	BAT54AG-AL3-R	SOT-323	K1	K2	A2A1	Tape Reel
BAT54CL-AL3-R	BAT54CG-AL3-R	SOT-323	A1	A2	K2K1	Tape Reel
BAT54SL-AL3-R	BAT54SG-AL3-R	SOT-323	K1	A2	K2A1	Tape Reel

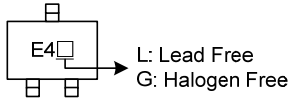
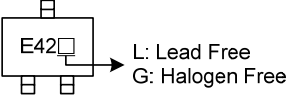
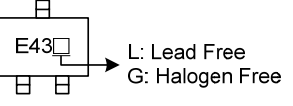
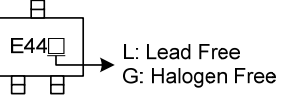
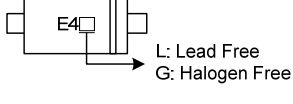
Note: Pin Assignment: A: Anode K: Cathode x:NC

<p>BAT54xL-AE3-R</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23, AL3: SOT-323, CB2: SOD-323</p> <p>(3) G: Halogen Free, L: Lead Free</p> <p>(4) refer to Diode to Configuration and Symbol</p>
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■ DIODE CONFIGURATION AND SYMBOL

BAT54	BAT54A	BAT54C	BAT54S
			

■ MARKING

BAT54	BAT54A	BAT54C	BAT54S
			
			

### ■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
<b>Per diode</b>			
Continuous Reverse Voltage	$V_R$	30	V
Continuous Forward Current	$I_F$	200	mA
Repetitive Peak Forward Current ( $t_p < 1s, \delta \leq 0.5$ )	$I_{FRM}$	300	mA
Non-repetitive Peak Forward Current ( $t_p < 10ms$ )	$I_{FSM}$	600	mA
Junction Temperature	$T_J$	+125	°C
Storage Temperature	$T_{STG}$	-60 ~ +150	°C
<b>Per device</b>			
Power Dissipation ( $T_a \leq 25^\circ C$ )	$P_D$	230	mW

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

### ■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-23	500	°C/W
	SOT-323	625	°C/W

### ■ ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ , unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage (See Fig.1)	$V_F$	$I_F = 0.1mA$			240	mV
		$I_F = 1mA$			320	mV
		$I_F = 10mA$			400	mV
		$I_F = 30mA$			500	mV
		$I_F = 100mA$			800	mV
Reverse Current (See Fig.2)	$I_R$	$V_R = 25V$			2	$\mu A$
Reverse Recovery Time (see Fig.4)	$t_{rr}$	When switched from $I_F = 10mA$ to $I_R = 10mA, R_L = 100\Omega$ measured at $I_R = 1mA$			5	ns
Diode Capacitance (see Fig.3)	$C_d$	$f = 1 MHz, V_R = 1V;$			10	pF

## ■ TYPICAL CHARACTERISTICS

Fig.1 Forward current as a function of forward voltage; typical values.

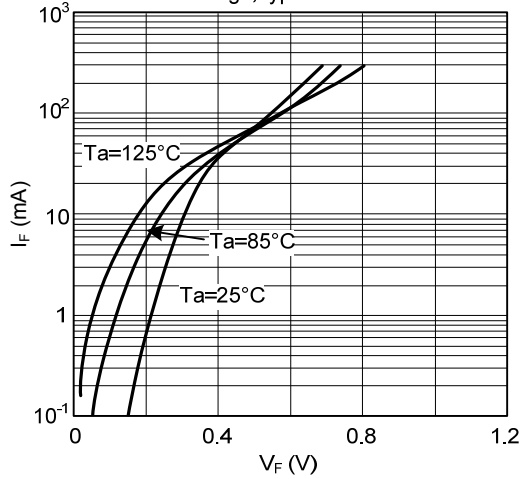


Fig.2 Reverse current as a function of reverse voltage; typical values.

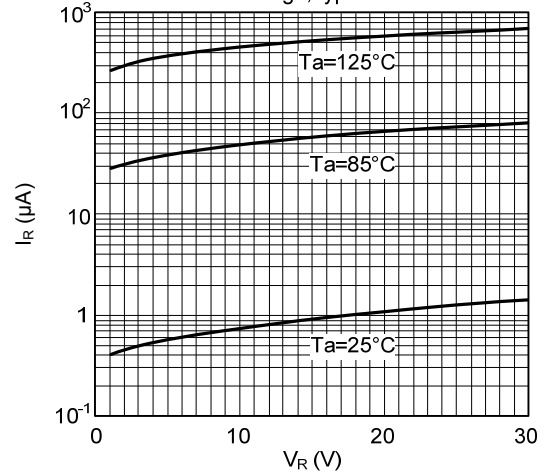


Fig.3 Diode capacitance as a function of reverse voltage; typical values.

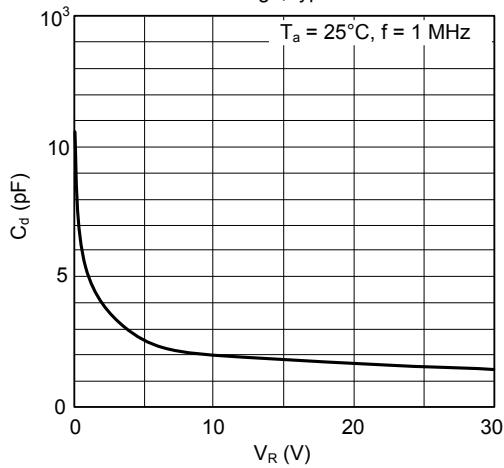
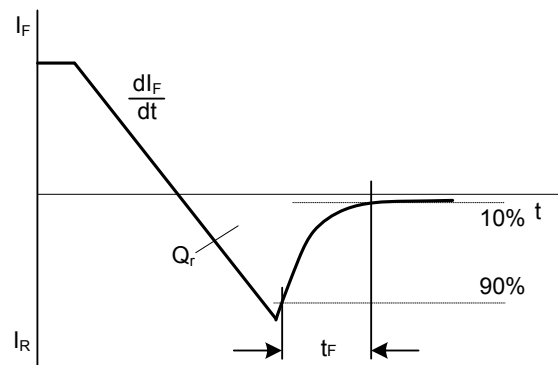


Fig.4 Reverse recovery definitions



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