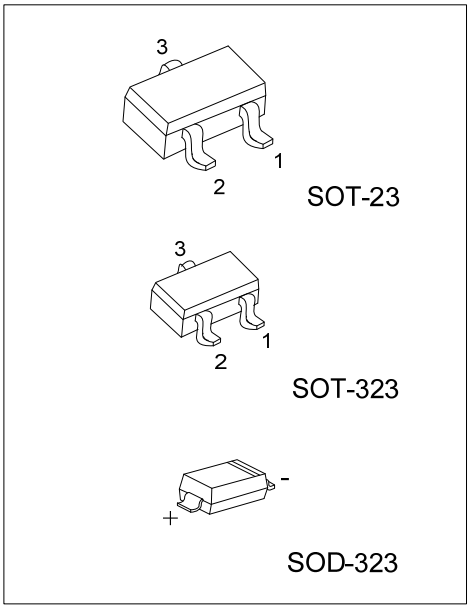
BAT54x

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

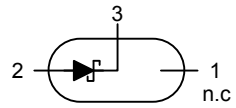
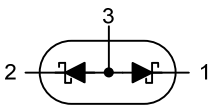
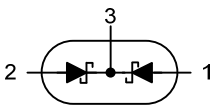
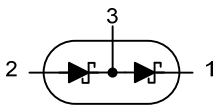
■ ORDERING INFORMATION

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

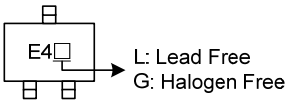
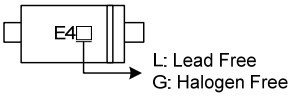
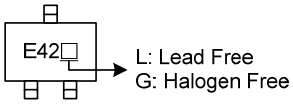
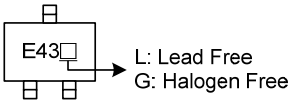
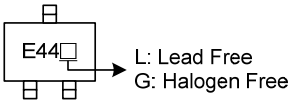
Note: Pin Assignment: A: Anode K: Cathode x:NC

BAT54xL-AE3-R (1)Packing Type (2)Package Type (3)Lead Plating (4)Pin Assignment	(1) R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323, CB2: SOD-323 (3) G: Halogen Free, L: Lead Free (4) refer to Diode to Configuration and Symbol

■ DIODE CONFIGURATION AND SYMBOL

BAT54	BAT54A	BAT54C	BAT54S
			

■ MARKING

BAT54	BAT54A	BAT54C	BAT54S
 			

■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Per diode			
Continuous Reverse Voltage	V_R	30	V
Continuous Forward Current	I_F	200	mA
Repetitive Peak Forward Current (t_p <1s, δ≤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
Per device			
Power Dissipation (Ta≤25°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	$θ_{JA}$	500	°C/W
	SOT-323		625	°C/W

■ ELECTRICAL CHARACTERISTICS (Ta = 25°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	μA
Reverse Recovery Time (see Fig.4)	t_{rr}	When switched from I_F =10mA to I_R = 10mA, R_L = 100Ω 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.

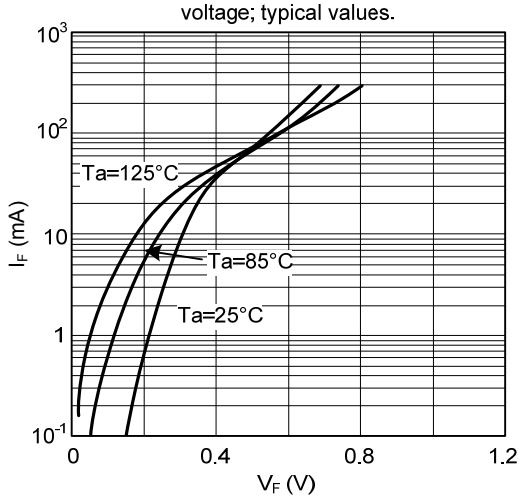


Fig.2 Reverse current as a function of reverse voltage; typical values.

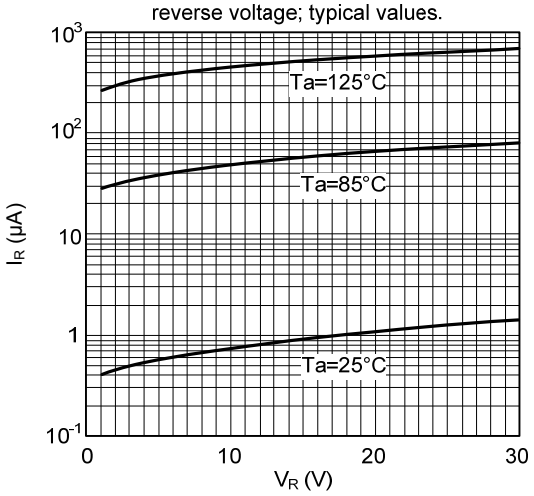


Fig.3 Diode capacitance as a function of reverse voltage; typical values.

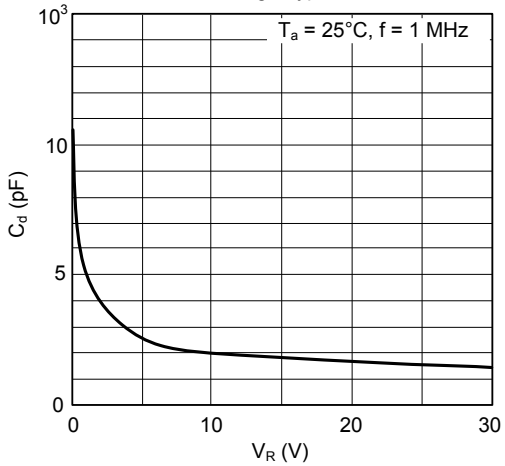


Fig.4 Reverse recovery definitions