

**Small Signal Schottky (double) diodes**

# BAT54N3/BAT54AN3

# BAT54CN3/BAT54SN3

**Description**

Planar silicon Schottky barrier diodes encapsulated in a SOT-23 small plastic SMD package. Single diodes and double diodes with different pinning are available.

**Features**

- Very small conduction losses
- Low forward voltage drop
- Small plastic SMD package

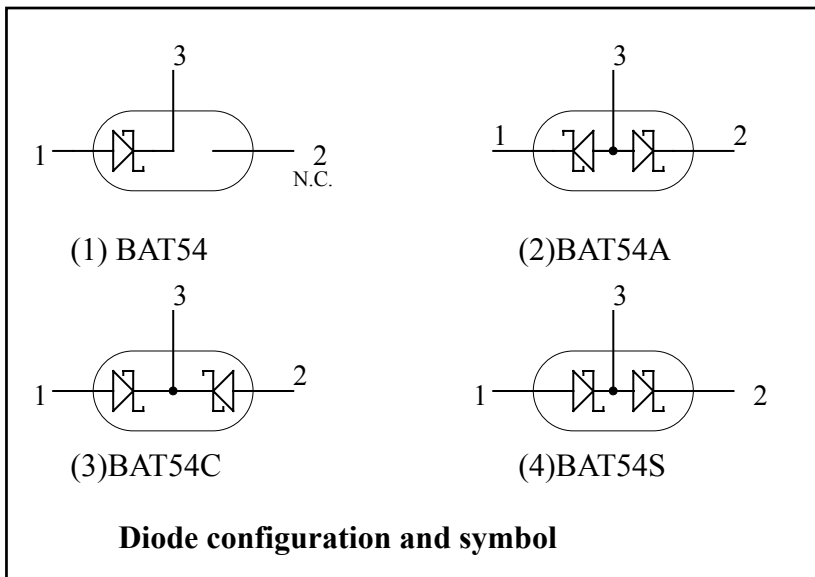
**Applications**

- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Blocking diodes

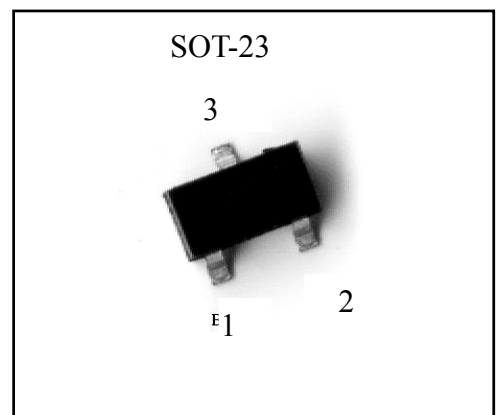
Datasheet.Live

**Pinning**

Pin	Description			
	BAT54	BAT54A	BAT54C	BAT54S
1	A	K1	A1	A1
2	NC	K2	A2	K2
3	K	A1,A2	K1,K2	K1,A1



**Outline**



**Marking:**

Type	Marking Code
BAT54 N3	JV3
BAT54AN3	B6
BAT54CN3	5C
BAT54SN3	LD3



### Absolute Maximum Ratings

- Maximum Temperatures  
Storage Temperature Tstg..... -65~+150 °C  
Junction Temperature Tj ..... +125°C
- Maximum Power Dissipation  
Total Power Dissipation (Ta=25°C) Ptot (Note) ..... 230 mW
- Maximum Voltages and Currents (Ta=25°C)  
Repetitive Peak Reverse Voltage VRRM..... 30 V  
Continuous Forward Current IF ..... 200 mA  
Repetitive Peak Forward Current(tp≤1s,duty cycle≤0.5)..... 300mA  
Non-repetitive Peak Forward Current (tp<10ms, sinusoidal) IFSM ..... 600 mA

Note:for double diodes, Ptot is the total power dissipation of both diodes.

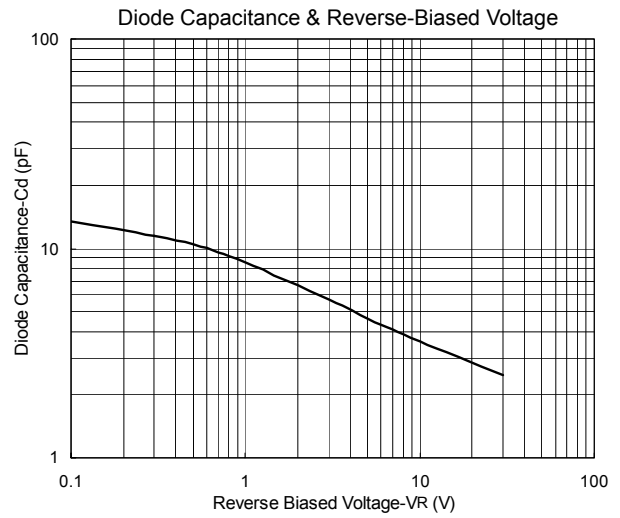
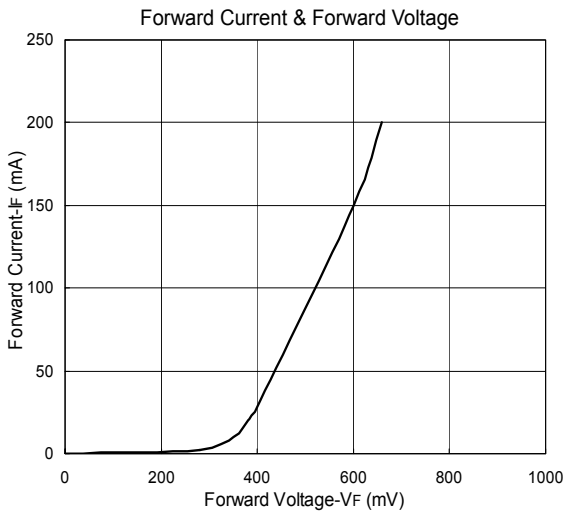
### Characteristics (Ta=25°C)

Characteristic	Symbol	Condition	Min.	Max.	Unit
Reverse Breakdown Voltage	VBR	IR=100μA	30	-	V
Forward Voltage (Note 1)	VF(1)	IF=0.1mA	-	240	mV
	VF(2)	IF=1mA	-	320	mV
	VF(3)	IF=10mA	-	400	mV
	VF(4)	IF=30mA	-	500	mV
	VF(5)	IF=100mA	-	800	mV
Reverse Leakage Current (Note 2)	IR	VR=25V,Tj=25°C	-	2	μA
Diode Capacitance	CD	VR=1V, f=1MHz	-	10	pF
Reverse Recovery Time	trr	IF=IR=10mA RL=100Ω measured at IR=1mA	-	5	ns

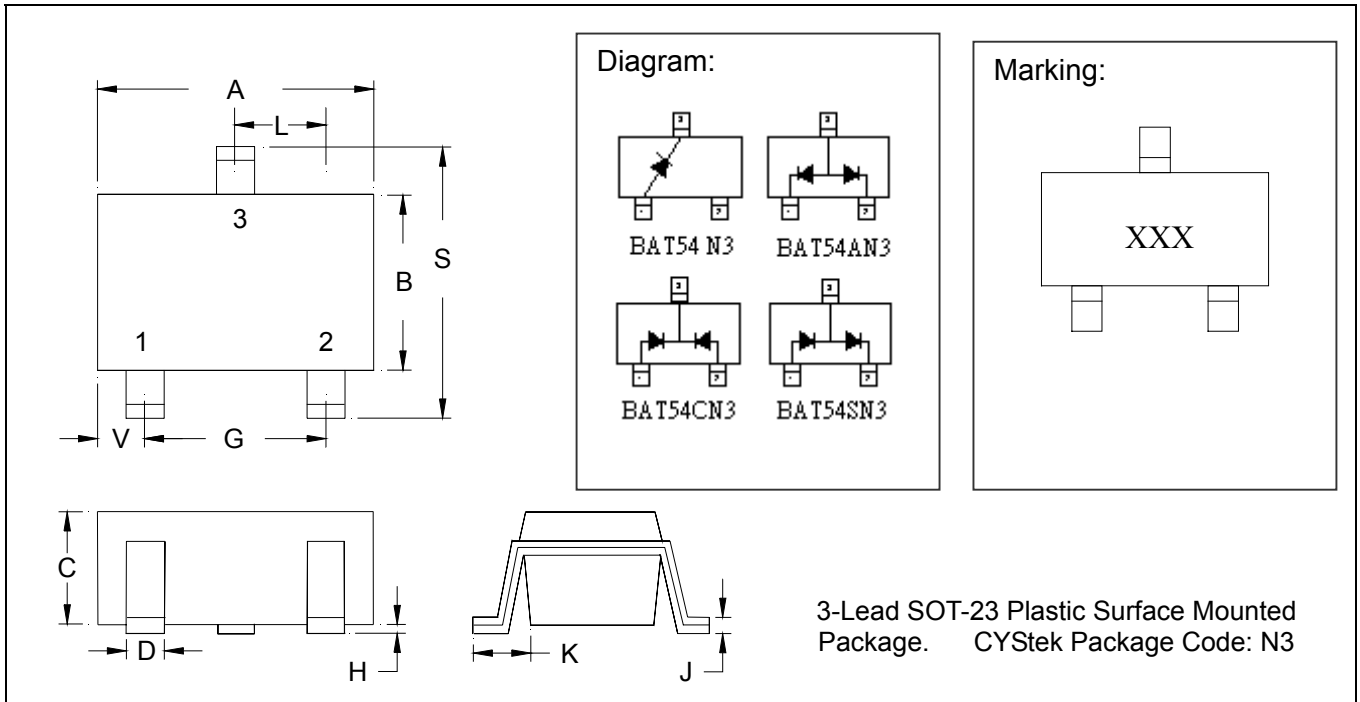
Notes: 1.pulse test, tp=380μs,duty cycle<2%.  
2.pulse test, tp=5ms,duty cycle<2%.



### Characteristic Curves



**SOT-23 Dimension**



- BAT54 N3: Single Diode (Marking Code JV3)
- BAT54AN3: Common Anode. (Marking Code B6)
- BAT54CN3: Common Cathode. (Marking Code 5C)
- BAT54SN3: Series Connected. (Marking Code LD3)

\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.85	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

**Notes:** 1.Controlling dimension: millimeters.  
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material:**

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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