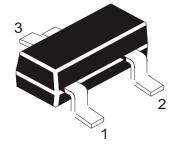
# SILICON PLANAR SCHOTTKY DIODES



Pin Configuration 1 = ANODE 2 = NC 3 = CATHODE



## BAT54

SOT-23 Formed SMD Package For Lead Free Parts, Device Part # will be Prefixed with "T"

Marking BAT54 =L4

Ultra High Speed Switching Diodes

### **ABSOLUTE MAXIMUM RATINGS**

DESCRIPTION	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	30	V
Forward Current (DC)	I <sub>F</sub>	200	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	300	mA
Non Repetitive Peak Forward Current t<1s	I <sub>FSM</sub>	600	mA
Power Dissipation T <sub>a</sub> =25°C	PD	230	mW
Storage Temperature Range	T <sub>stg</sub>	- 55 to +150	°C
Junction Temperature	Tj	125	°C

## THERMAL RESISTANCE

Junction to Ambient in free air	R <sub>th (j-a)</sub>	430	K/W
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### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25° C unless specified otherwise)

DESCRIPTION	SYMBOL	<b>TEST CONDITION</b>	MIN	MAX	UNIT
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =0.1mA		0.24	V
		*I <sub>F</sub> =1mA		0.32	V
		I <sub>F</sub> =10mA		0.40	V
		*I <sub>F</sub> =30mA		0.50	V
		I <sub>F</sub> =100mA		1.00	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =25V		2.0	μΑ
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =100μA	30		V

#### **DYNAMIC CHARACTERISTICS**

DESCRIPTION	SYMBOL	<b>TEST CONDITION</b>	MIN	MAX	UNIT
Diode Capacitance	C <sub>d</sub>	V <sub>R</sub> =1V, f=1MHz		15	pF
Reverse Recovery Time When Switched From	t <sub>rr</sub>	$I_F$ =10mA to $I_R$ =10mA, measured at $I_R$ =1mA, $R_L$ =100 $\Omega$		5	ns

\*Temperature coefficient of forward voltage

- 0.6 %K at I<sub>F</sub>=1mA

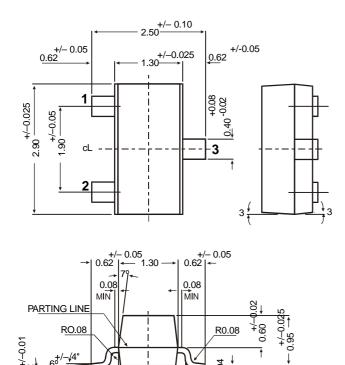
- 0.3 %K at I<sub>F</sub>=30mA

BAT54Rev\_1 071105E Continental Device India Limited

#### BAT54

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### SOT-23 Formed SMD Package



-/-

0.06

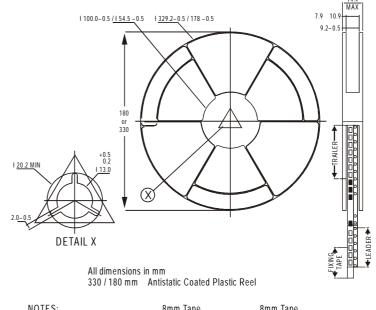
59

+/−0.10 2.50 ←

0.21

MIN

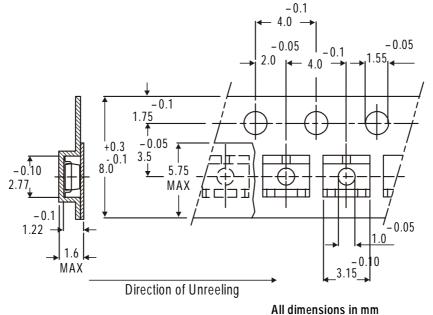
## SOT-23 Package Reel Information Reel specifications for Packing (13"/7" reels)



NUTES:		omm rape	8mm Tape
		Size of Reel	Size of Reel
		330 mm (13")	180 mm (7")
	No. of Devices	10,000 Pcs	3,000 Pcs

- 1. The bandolier of 330 mm reel contains at least 10,000 devices.
- 2. The bandolier of 180 mm reel contains at least 3,000 devices.
- 3. No more than 0.5% missing devices / reel. 50 empty compartments for 330 mm reel. 15 empty compartments for 180 mm reel.
- 4. Three consecutive empty places might be found provided this gap is followed by 6 consecutive devices.
- 5. The carrier tape (leader) starts with at least 75 empty positions (equivalent to 330 mm). In order to fix the carrier tape a self adhesive tape of 20 to 50 mm is applied. At the end of the bandolier at least 40 empty positions (equivalent to 160 mm) are there.

## Tape Specification for SOT-23 Surface Mount Device



Continental Device India Limited

## Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
SOT-23 T&R	3K/reel	5	3" x 7.5" x 7.5" 9" x 9" x 9"	12.0K 51.0K	17" x 15" x 13.5" 19" x 19" x 19"	192.0K 408.0K	12 kgs 28 kgs
	10K/reel	415 gm/10K pcs	13" x 13" x 0.5"	10.0K	17" x 15" x 13.5"	300.0K	16 kgs

## **Customer Notes**

### **Component Disposal Instructions**

- 1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
- 2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

### Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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