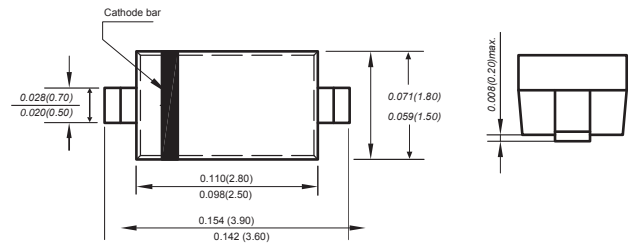


## SCHOTTKY DIODES

### Features

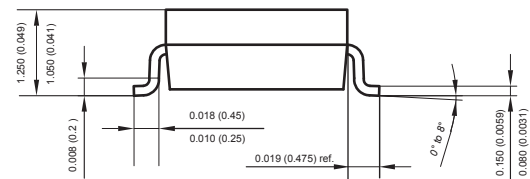
- ◆ Fast switching speed
- ◆ Surface mount package ideally suited
- ◆ for automatic insertion
- ◆ For general purpose switching applications High
- ◆ conductance

**SOD-123**



### Mechanical Data

Case: JEDEC SOD-123 molded plastic body  
 Terminals: Plated leads solderable per MIL-STD-750, Method 2026  
 Polarity: Polarity symbols marked on case  
 Weight: 0.0007 ounce, 0.02 grams  
 Marking: L9



Dimensions in inches and (millimeters)

### Absolute Maximum Ratings at 25 °C

Parameter	Symbols	BAT54T	Units
DC Blocking voltage	$V_R$	100	V
Maximum RMS voltage	$V_{RMS}$	53	V
Average rectified output current	$I_0$	100	mA
Continuous Forward Current	$I_F$	200	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	400	mA
Total Power Dissipation	$P_{tot}$	200	mW
Typical Thermal Resistance	$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	°C

### Characteristics at Ta= 25 °C

PARAMETER	SYMBOLS	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	30			V	$I_R=100\mu A$
Forward voltage	$V_{F1}$			240	mV	$I_F=0.1mA$
	$V_{F2}$			320	mV	$I_F=1.0mA$
	$V_{F3}$			400	mV	$I_F=10mA$
	$V_{F4}$			500	mV	$I_F=30mA$
	$V_{F5}$			1000	mV	$I_F=100mA$
Reverse current	$I_R$			2.0	$\mu A$	$V_R=25V$
Capacitance between terminals	$C_T$			10	pF	$V_R=0, f=1.0MHz$
Reverse recovery time	$t_{rr}$			5.0	ns	$I_F=10mA, I_R=10mA$ to 1mA $R_L=100 \Omega$

## Typical Characteristics

FIG. 1- MAX.FORWARD VOLTAGE DROP CHARACTERISTICS(PER LEG)

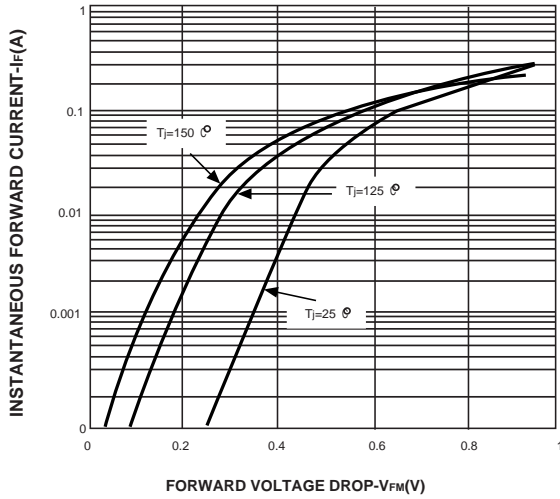


FIG. 2-TYPICAL VALUES OF REVERSE CURRENT VS REVERSE VOLTAGE (PER LEG)

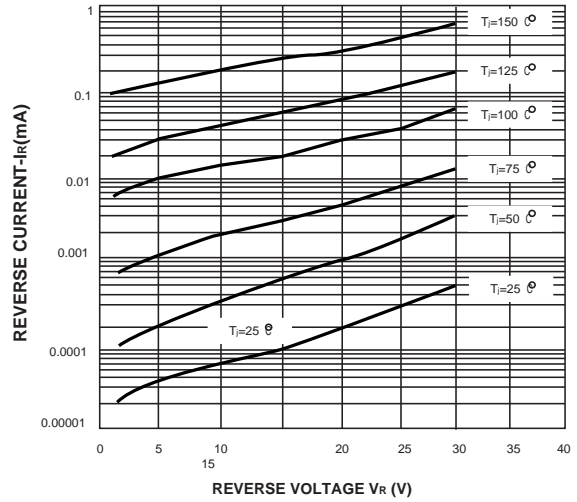


FIG. 3- TYPICAL JUNCTION CAPACITANCE

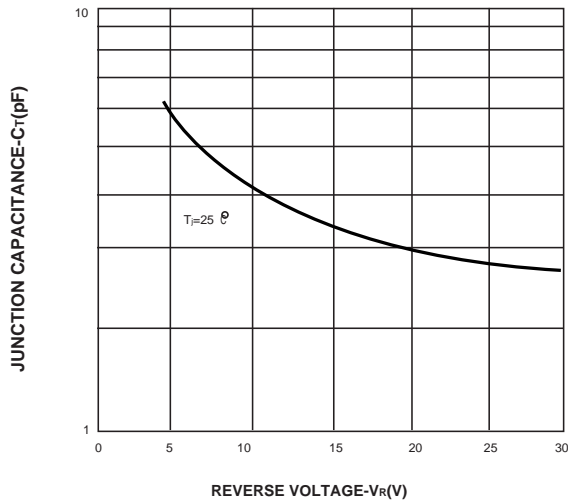


FIG. 4- FORWARD POWER LOSS CHARACTERISTICS

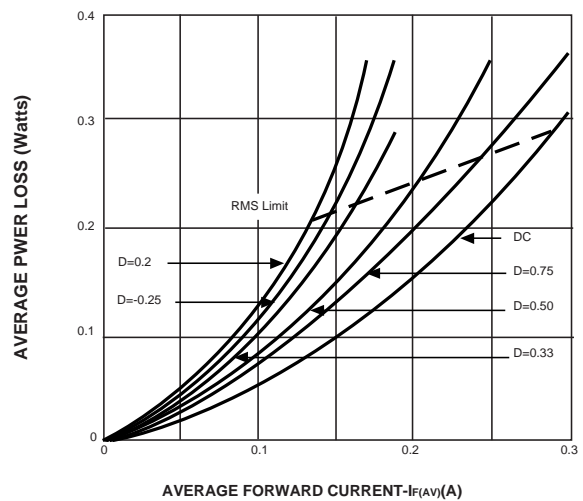
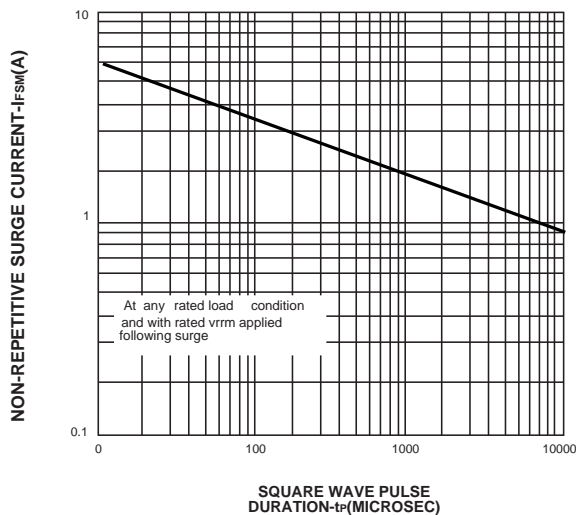


FIG. 5- MAX NON-REPETITIVE SURGE CURRENT



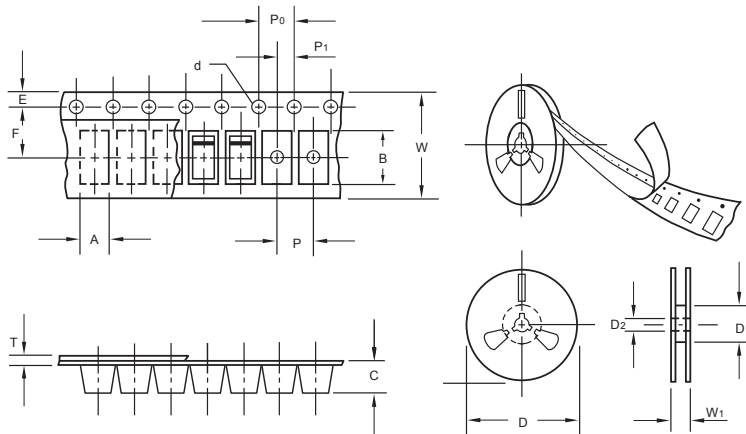
The curve above is for reference only.



# BAT54T

Reverse Voltage 21 Volts Forward Current - 0.1 Ampere

## Packing information



unit:mm

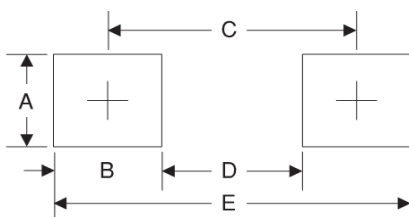
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	50.0
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W <sub>1</sub>	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2.0	0.079
E	4.4	0.173

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