

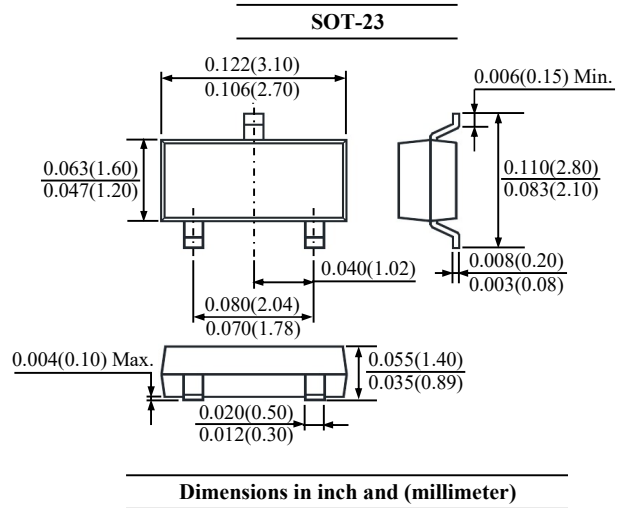
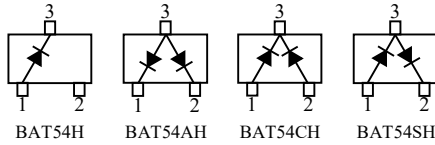


# BAT54H / BAT54AH / BAT54CH / BAT54SH

## SCHOTTKY BARRIER DIODES

### FEATURES

- Low forward voltage
- Suffix "H" indicates Halogen-free parts, ex. BAT54H.



### Maximum Ratings ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	30	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Non-Repetitive Peak Forward Surge Current at $t_p=1\text{s}$	$I_{FSM}$	600	mA
Power Dissipation	$P_D$	290	mW
Thermal Resistance from Junction Ambient (Note 1)	$R_{\theta JA}$	430	$^\circ\text{C} / \text{W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

Note:

1. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

### Electrical Characteristics ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

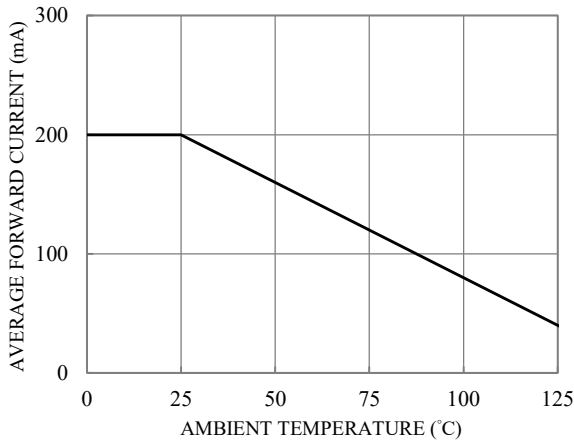
Parameter	Conditions	Symbol	Min	Max	Unit
Reverse Breakdown Voltage	$I_R=100\mu\text{A}$	$V_{(BR)R}$	30	-	V
Forward Voltage	$I_F=0.1\text{mA}$	$V_F$	-	240	mV
	$I_F=1\text{mA}$		-	320	
	$I_F=10\text{mA}$		-	400	
	$I_F=30\text{mA}$		-	500	
	$I_F=100\text{mA}$		-	1000	
Reverse Current	$V_R=25\text{V}$	$I_R$	-	2	$\mu\text{A}$
Total Capacitance	$V_R=1\text{V}$ , $f=1\text{MHz}$	$C_T$	-	10	pF
Reverse Recovery time	$I_F=10\text{mA}$ , $I_R=10\text{mA}$ , $I_{RR}=1\text{mA}$ , $R_L=100\ \Omega$	$t_{rr}$	-	5	ns



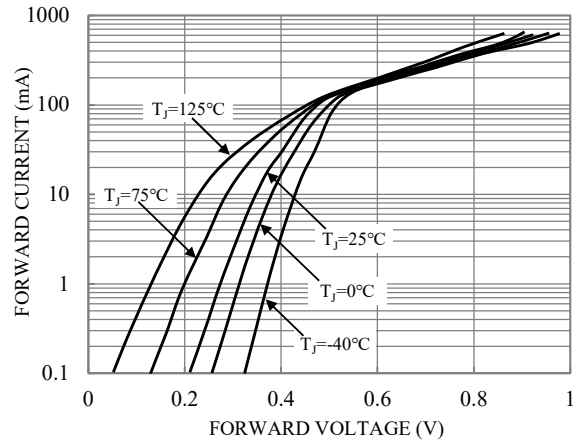
# BAT54H / BAT54AH / BAT54CH / BAT54SH

## SCHOTTKY BARRIER DIODES

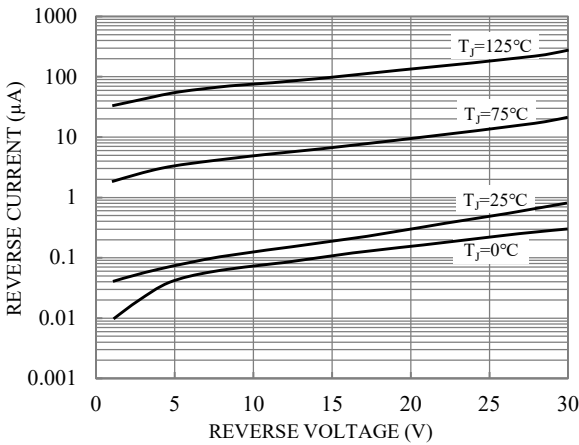
### RATINGS AND CHARACTERISTIC CURVES



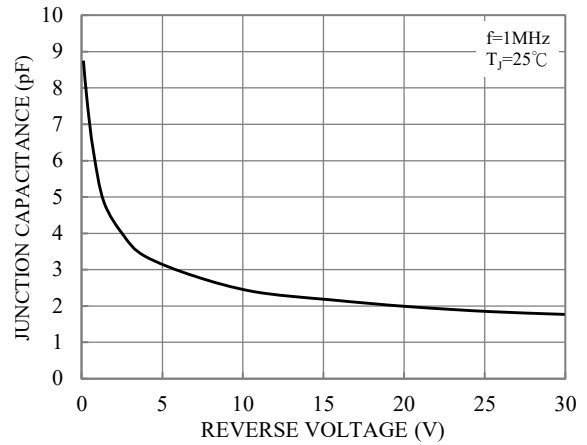
**Fig.1-FORWARD CURRENT DERATING CURVE**



**Fig.2-FORWARD CHARACTERISTICS CURVE**



**Fig.3-REVERSE CHARACTERISTICS CURVE**



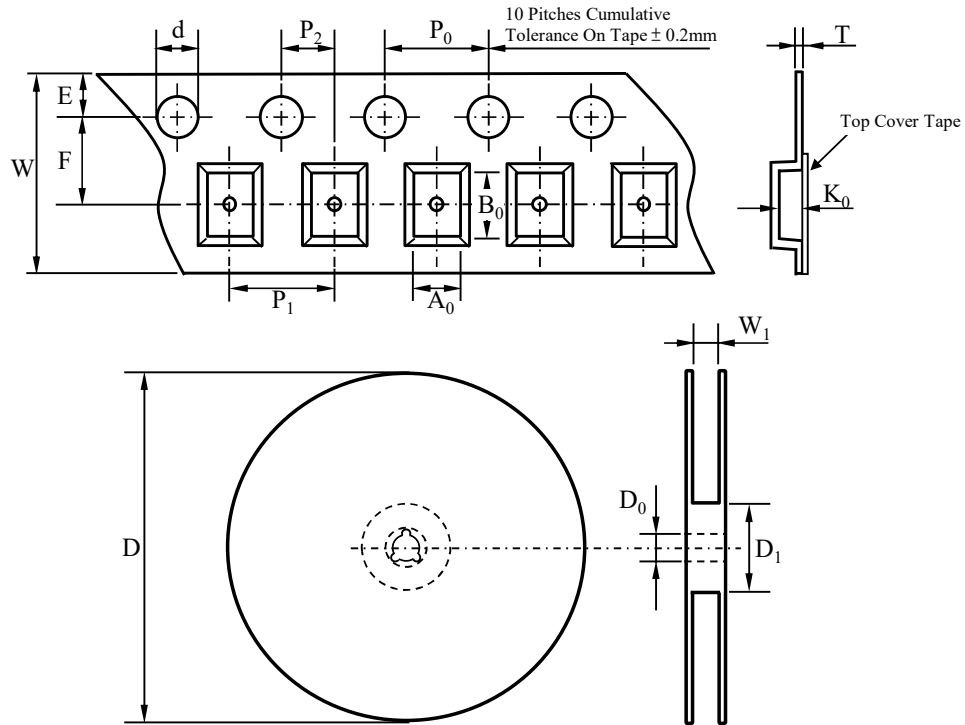
**Fig.4-JUNCTION CAPACITANCE**



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## SCHOTTKY BARRIER DIODES

### TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23
Carrier width	$A_0$	*
Carrier length	$B_0$	
Carrier depth	$K_0$	
Sprocket hole	$d$	$1.50 \pm 0.10$
Reel outside diameter	$D$	$178.00 \pm 2.00$
Feed hole width	$D_0$	$13.00 \pm 0.50$
Reel inner diameter	$D_1$	MIN. 50.00
Sprocket hole position	$E$	$1.75 \pm 0.10$
Punch hole position	$F$	$3.50 \pm 0.10$
Sprocket hole pitch	$P_0$	$4.00 \pm 0.10$
Punch hole pitch	$P_1$	$4.00 \pm 0.10$
Embossment center	$P_2$	$2.00 \pm 0.10$
Overall tape thickness	$T$	$0.20 \pm 0.05$
Tape width	$W$	$8.00 \pm 0.20$
Reel width	$W_1$	MAX. 14.50

Note \*:  $A_0$ ,  $B_0$ , and  $K_0$  are determined by component size. The clearance between the components and the cavity must be within 0.05 mm min. to 0.5 mm max.

### ORDER INFORMATION

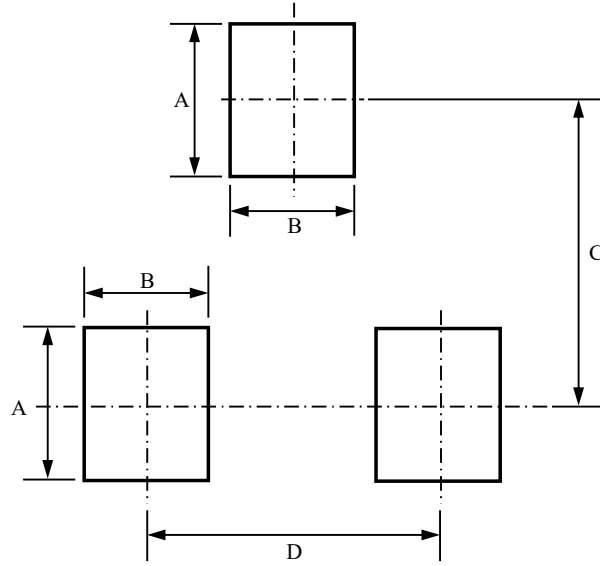
Part Number	Marking Code	Reel Size	Quantity
BAT54H	L4	7"	3,000
BAT54AH	L42		
BAT54CH	L43		
BAT54SH	L44		



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## SCHOTTKY BARRIER DIODES

### SUGGESTED SOLDER PAD LAYOUT



Unit :mm

PACKAGE	A	B	C	D
SOT-23	1.00	0.80	2.00	1.90