

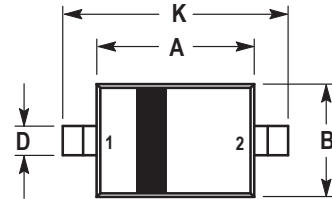
## BAT54H

Surface Mount Schottky  
Barrier Diode

### Features

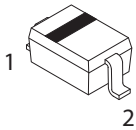
Low Turn-on Voltage  
Extremely Fast Switching Speed  
PN Junction Guard Ring for Transient and  
ESD Protection

### PACKAGE DIMENSIONS SOD-323 PLASTIC PACKAGE



### Mechanical Data

Case: Molded Plastic  
Polarity: See Diagrams Below  
Mounting Position : Any  
Low Forward Voltage : 0.35 Volts (Typ) @  $I_F = 10 \text{ mAdc}$   
Shipping : 3000 / Tape & Reel

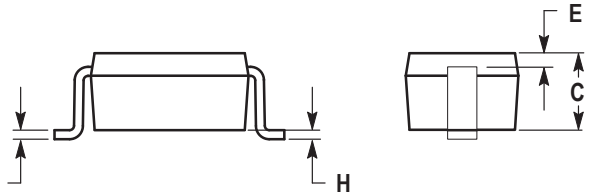


PIN 1. CATHODE  
2. ANODE



BAT54H M marking : JV

NOTE 3



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSII Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

### MAXIMUM RATING S ( $T_J = 125 \text{ }^\circ\text{C}$ unless otherwise noted)

Symbol	Rating	Value	Unit
$V_R$	Reverse Voltage	30	V

### THERMAL CHARACTERISTICS

Symbol	Characteristic	Max	Unit
$P_D$	Total Device Dissipation FR-5 Board,*	200	mW
	$T_A = 25 \text{ }^\circ\text{C}$ Derate above $25 \text{ }^\circ\text{C}$	1.57	mW/ $^\circ\text{C}$
$R_{JA}$	Thermal Resistance Junction to Ambient	635	$^\circ\text{C}/\text{W}$
$T_J, T_{stg}$	Junction and Storage Temperature	150	$^\circ\text{C}$

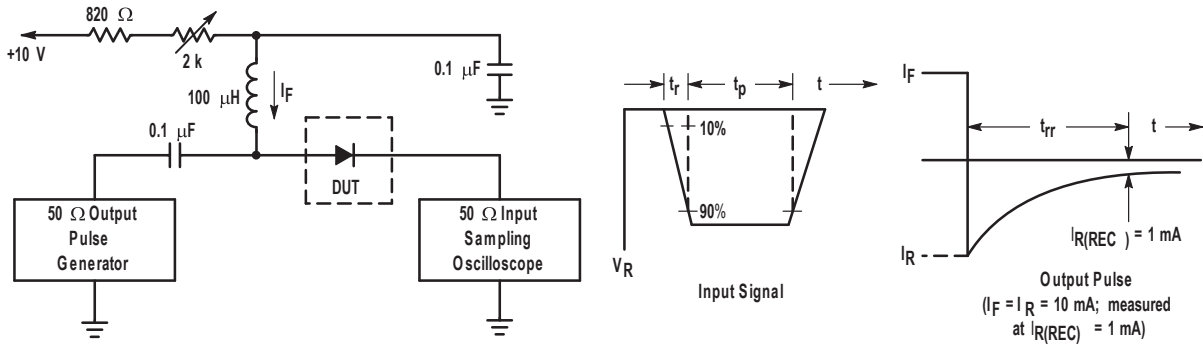
\*FR-4 Minimum Pad

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

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ( $I_R = 10 \text{ } \mu\text{A}$ )	$V_{(BR)R}$	30	—	—	Volts
Total Capacitance ( $V_R = 1.0 \text{ V}$ , $f = 1.0 \text{ MHz}$ )	$C_T$	—	7.6	10	pF
Reverse Leakage ( $V_R = 25 \text{ V}$ )	$I_R$	—	0.5	2.0	$\mu\text{Adc}$
Forward Voltage ( $I_F = 0.1 \text{ mAdc}$ )	$V_F$	—	0.22	0.24	Vdc
Forward Voltage ( $I_F = 30 \text{ mAdc}$ )	$V_F$	—	0.41	0.5	Vdc
Forward Voltage ( $I_F = 100 \text{ mAdc}$ )	$V_F$	—	0.52	1.0	Vdc
Reverse Recovery Time ( $I_F = I_R = 10 \text{ mAdc}$ , $I_{R(REC)} = 1.0 \text{ mAdc}$ ) Figure 1	$t_{rr}$	—	—	5.0	ns
Forward Voltage ( $I_F = 1.0 \text{ mAdc}$ )	$V_F$	—	0.29	0.32	Vdc
Forward Voltage ( $I_F = 10 \text{ mAdc}$ )	$V_F$	—	0.35	0.40	Vdc
Forward Current (DC)	$I_F$	—	—	200	mAdc
Repetitive Peak Forward Current	$I_{FRM}$	—	—	300	mAdc
Non-Repetitive Peak Forward Current ( $t < 1.0 \text{ s}$ )	$I_{FSM}$	—	—	600	mAdc

## RATINGS AND CHARACTERISTIC CURVES BAT54H



- Notes: 1. A 2.0 k  $\Omega$  variable resistor adjusted for a Forward Current ( $I_F$ ) of 10 mA.  
 2. Input pulse is adjusted so  $I_R(\text{peak})$  is equal to 10 mA.  
 3.  $t_p \approx t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

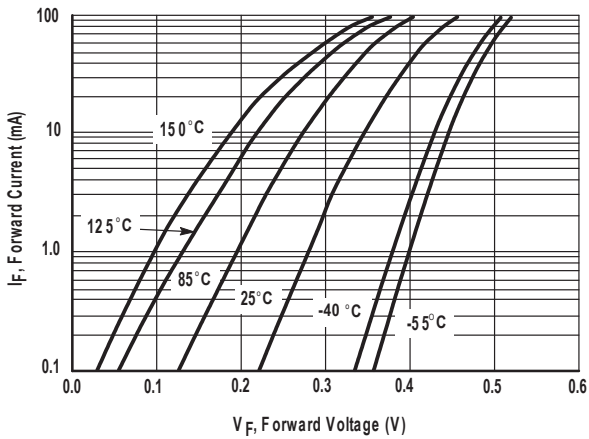


Figure 2. Forward Voltage

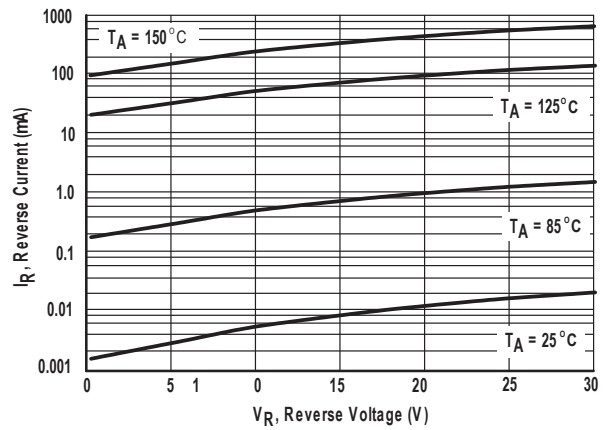


Figure 3. Leakage Current

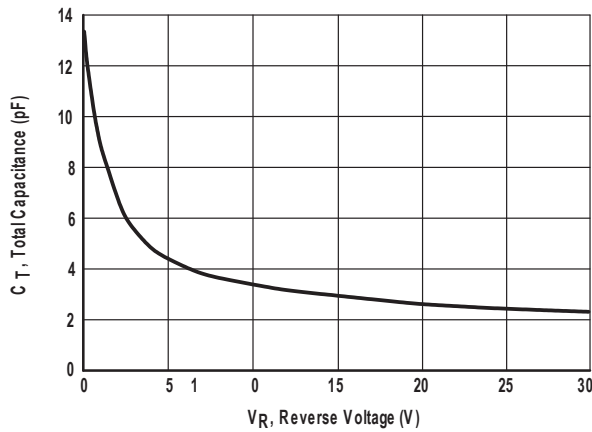


Figure 4. Total Capacitance