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DEC

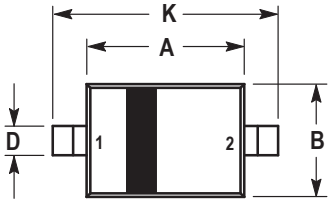
BAT54H

Surface Mount Schottky Barrier Diode

Features

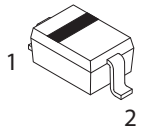
Low Turn-on Voltage
Extremely Fast Switching Speed
PN Junction Guard Ring for Transient and ESD Protection

PACKAGE DIMENSIONS
SOD-323
PLASTIC PACKAGE



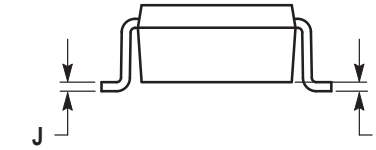
Mechanical Data

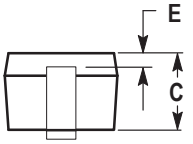
Case: Molded Plastic
Polarity: See Diagrams Below
Mounting Position : Any
Low Forward Voltage : 0.35 Volts (Typ) @ IF = 10 mAdc
Shipping : 3000 / Tape & Reel



PIN 1. CATHODE
2. ANODE

BAT54H Marking : JV





NOTES:
1.DIMENSIONING AND TOLERANCING PER ANSIY14.5M, 1982.
2.CONTROLLING DIMENSION: MILLIMETERS.
3.LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

MAXIMUM RATINGS (T_J = 125 5C 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,* T_A = 25 °C	200	mW
	Derate above 25 °C	1.57	mW/ °C
R_{JA}	Thermal Resistance Junction to Ambient	635	°C/W
T_J, T_{stg}	Junction and Storage Temperature	150	°C

*FR FR-4Minimum Pad

	MILLIMETERS		INCHES	
DIM	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

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)

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

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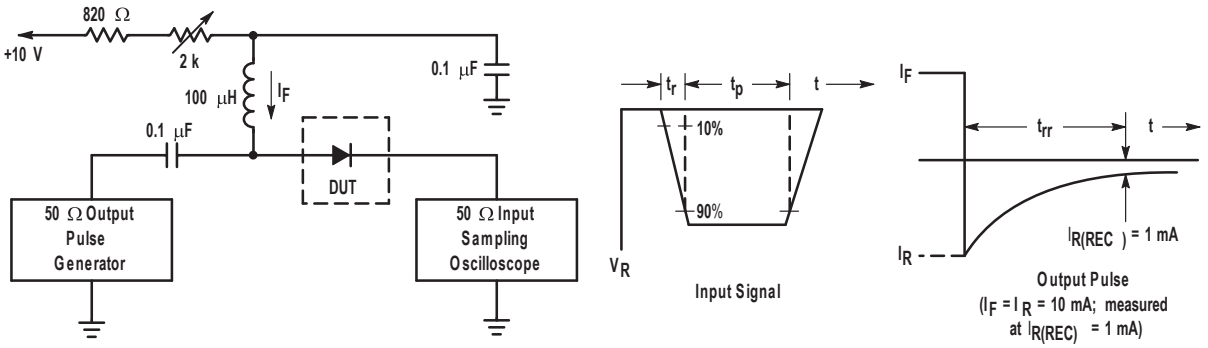
RATINGS AND CHARACTERISTIC CURVES BAT54H



Notes: 1. A 2.0 k Ω variable resistor adjusted for a Forward Current (I_F) of 10 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
3. t_p ? t_{rr}

Figure 1. Recovery Time Equivalent Test Circuit

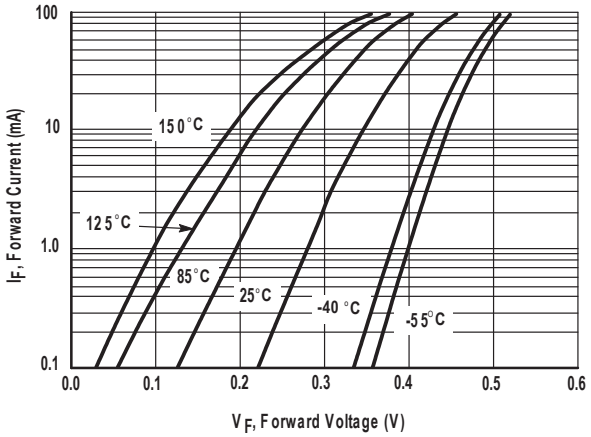


Figure 2. Forward Voltag e

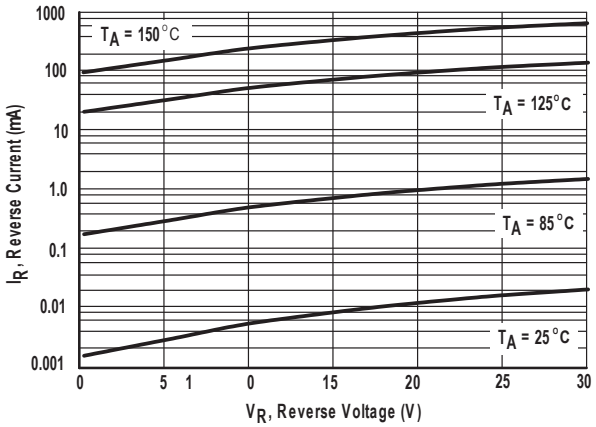


Figure 3. Leakage Current

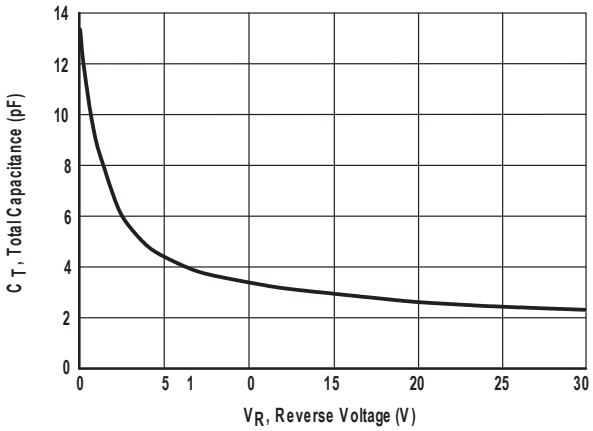


Figure 4. Total Capacitance