



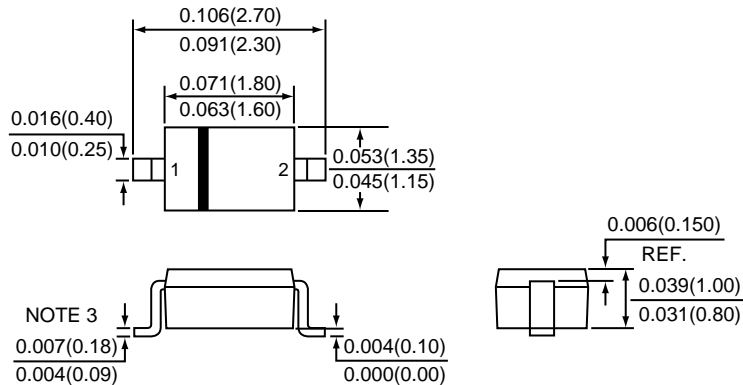
BAT54HT1

SURFACE MOUNT SCHOTTKY BARRIER DIODES

Reverse Breakdown Voltage - 30 Volts

Peak Forward Current - 200mA

SOD-323

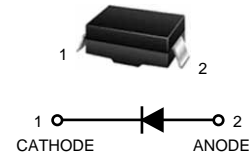


- NOTE 3
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: MILLIMETERS.
 3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

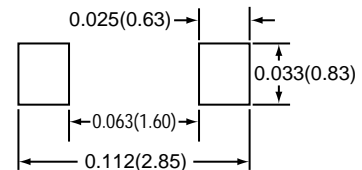
*Dimensions in inches and (millimeters)

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

- * Extremely Fast Switching Speed
- * Low Forward Voltage - 0.35 Volts (Typ) @ $I_F = 10\text{mA}$
- * Device Marking : JV



Soldering Footprint



MAXIMUM RATINGS

Ratings at 25 °C ambient temperature unless otherwise specified.	SYMBOLS	VALUE	UNITS
Continuous Reverse Voltage	V_R	30	Vdc

THERMAL CHARACTERISTICS

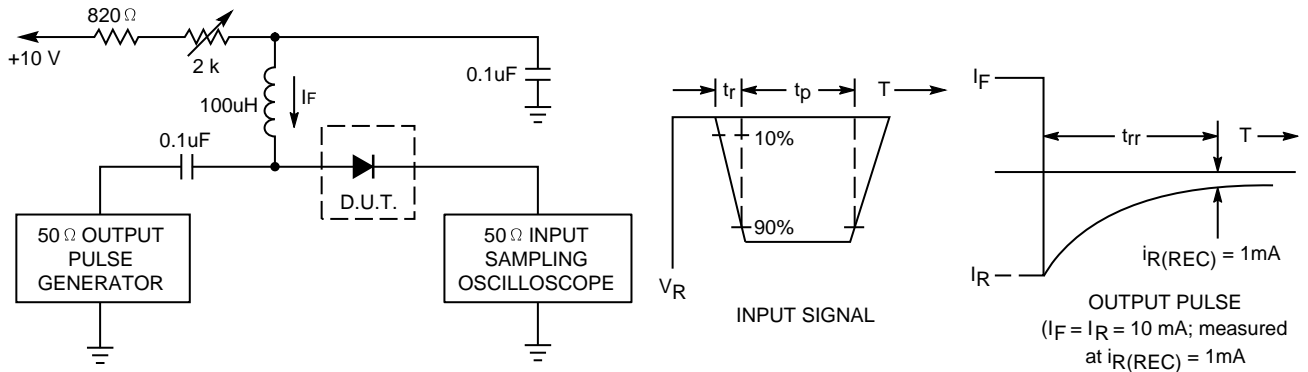
CHARACTERISTIC	SYMBOLS	MAX.	UNITS
Total Device Dissipation FR-5 Board, $T_A = 25^\circ\text{C}$	P_D	200	mW
Derate above 25 °C		1.57	mW / °C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	°C / W
Junction and Storage Temperature	T_J, T_{STG}	150	°C

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

CHARACTERISTIC	SYMBOLS	MIN.	TYP.	MAX.	UNITS
Reverse Breakdown Voltage ($I_R = 10\mu\text{A}$)	$V_{(BR)}$	30	-	-	Vdc
Reverse Voltage Leakage Current ($V_R = 25\text{Vdc}$)	I_R	-	0.5	2.0	μA
Forward Voltage ($I_F = 0.1\text{mA}$) ($I_F = 1.0\text{mA}$) ($I_F = 10\text{mA}$) ($I_F = 30\text{mA}$) ($I_F = 100\text{mA}$)	V_F	-	0.22 0.29 0.35 0.41 0.52	0.24 0.32 0.40 0.50 1.00	Vdc
Junction Capacitance ($V_R = 1.0\text{V}$, $f = 1.0\text{MHz}$)	C_J	-	7.6	10	pF
Reverse Recovery Time ($I_F = I_R = 10\text{mA}$, $I_R(\text{REC}) = 1.0\text{mA}$)	t_{rr}	-	-	5.0	nS
Forward Current (DC)	I_F	-	-	200	mA
Repetitive Peak Forward Current	I_{FRM}	-	-	300	mA
Non-Repetitive Peak Forward Current ($t < 1.0\text{s}$)	I_{FRM}	-	-	600	mA

RATINGS AND CHARACTERISTIC CURVES OF BAT54HT1

FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT



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

FIGURE 2. FORWARD VOLTAGE

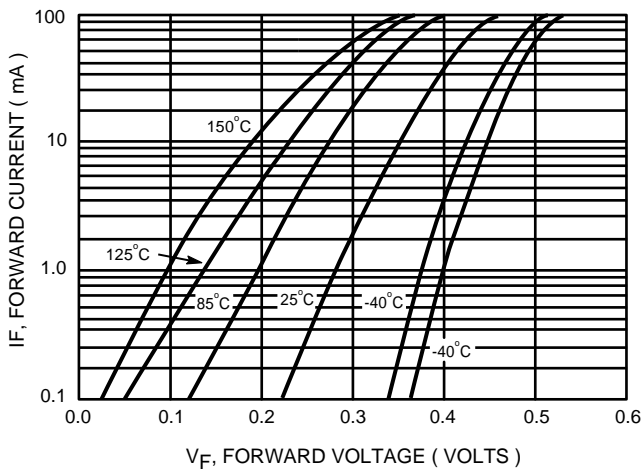


FIGURE 3. LEAKAGE CURRENT

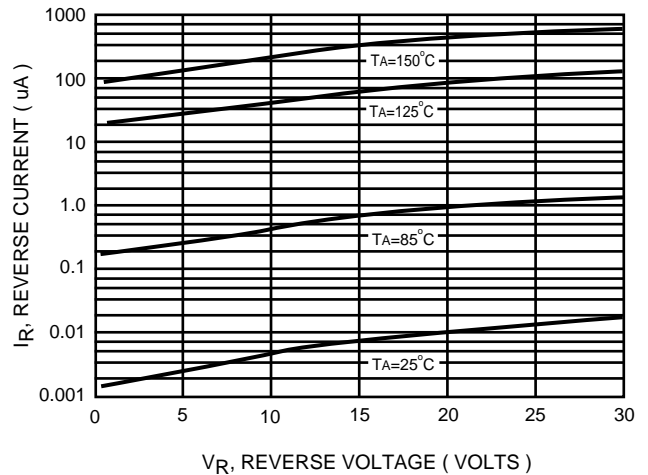


FIGURE 4. CAPACITANCE

