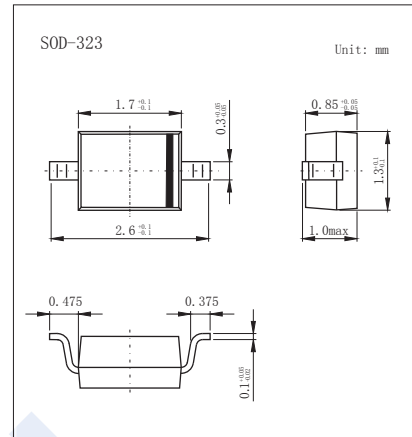


## Schottky Diodes

### BAT54HT1 (KAT54HT1)

#### ■ Features

- Extremely Fast Switching Speed
- Low Forward Voltage
- Pb-Free Package is Available



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Reverse Voltage	$V_{RM}$	30	V
Forward Current	$I_F$	200	mA
Repetitive Peak Forward Current	$I_{FRM}$	300	
Non-Repetitive Peak Forward Current ( $t < 1\text{s}$ )	$I_{FSM}$	600	
Power Dissipation	$P_d$	200	mW
-Derate above $25^\circ\text{C}$		1.57	mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature range	$T_{stg}$	-55 to 150	

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_R$	$I_R = 10\ \mu\text{A}$	30			V
Forward voltage	$V_F$	$I_F = 0.1\ \text{mA}$			0.24	
		$I_F = 1\ \text{mA}$			0.32	
		$I_F = 10\ \text{mA}$			0.4	
		$I_F = 30\ \text{mA}$			0.5	
		$I_F = 100\ \text{mA}$			0.8	
Reverse voltage leakage current	$I_R$	$V_R = 25\ \text{V}$			2	$\mu\text{A}$
Junction capacitance	$C_j$	$V_R = 1\ \text{V}, f = 1\ \text{MHz}$			10	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 10\ \text{mA}, I_{R(REC)} = 1\ \text{mA}$			5	ns

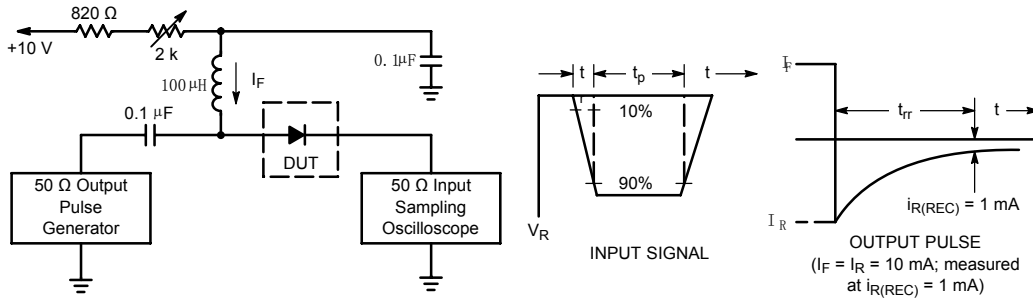
#### ■ Marking

Marking	JV*
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# Schottky Diodes

## BAT54HT1 (KAT54HT1)

■ Typical Characteristics



- Notes: 1. A 2.0 kΩ 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.  $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

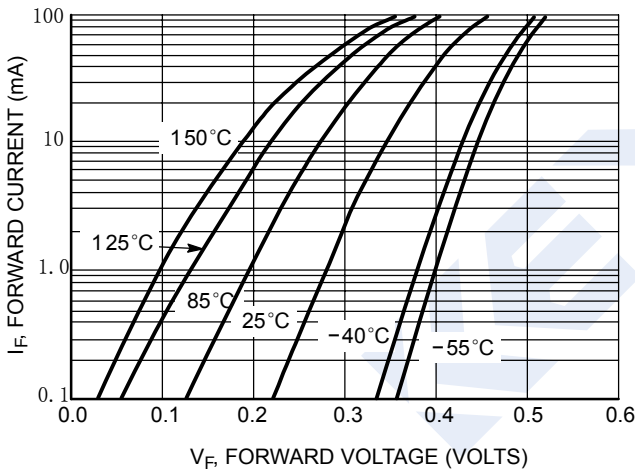


Figure 2. Forward Voltage

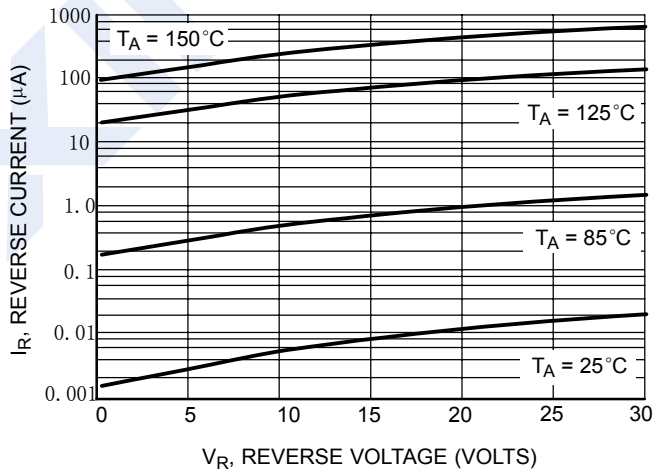


Figure 3. Leakage Current

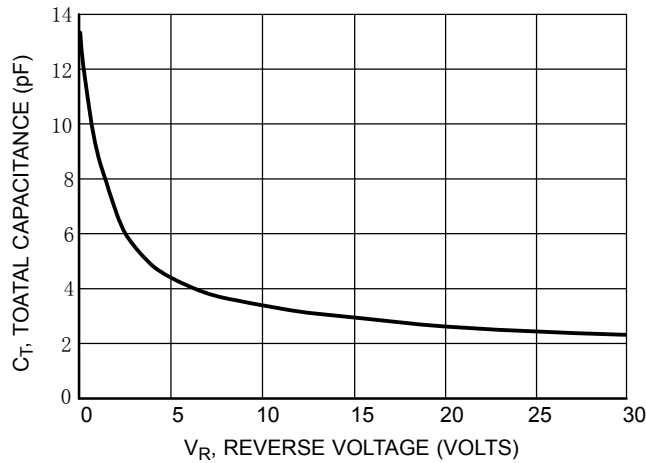


Figure 4. Total Capacitance