

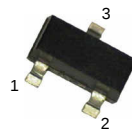
Schottky Barrier Diode

30 VOLT
SCHOTTKY BARRIER
DETECTOR AND SWITCHING
DIODE

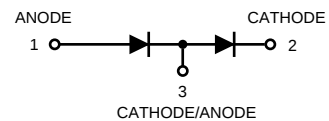
These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

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

BAT54S



SOT-23



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

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	30	Volts
Forward Power Dissipation @ $T_A=25^\circ\text{C}$ Derate above 25°C	P_F	225 1.8	mW mW / $^\circ\text{C}$
Operating Junction Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

DEVICE MARKING

BAT54S=LD3

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

Characteristic	Symbol	Min.	Typ.	Max.	Unit
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OFF CHARACTERISTICS

Reverse Breakdown Voltage ($I_R=10\text{ }\mu\text{A}$)	$V_{(BR)}$	30	-	-	Volts
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 1.0	Vdc
Reverse Leakage ($V_R=25\text{ Vdc}$)	I_R	-	0.5	2.0	μA
Diode Capacitance ($V_R=1.0\text{ V}$, $f=1.0\text{ MHz}$)	C_J	-	7.6	10	pF
Reverse Recovery Time ($I_F=I_R=10\text{ mA}$, $I_{R(REC)}=1.0\text{ mA}$)	t_{rr}	-	-	5.0	nS

FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT

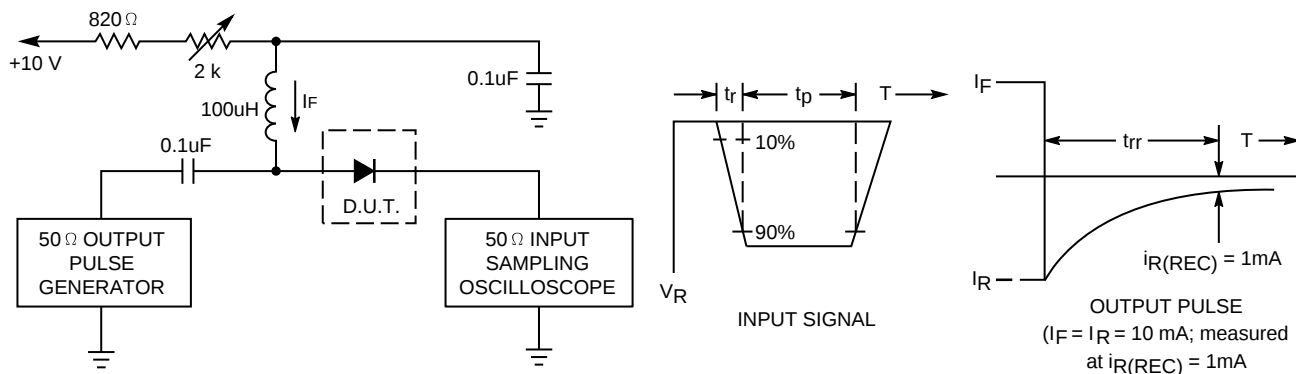


FIGURE 2. FORWARD VOLTAGE

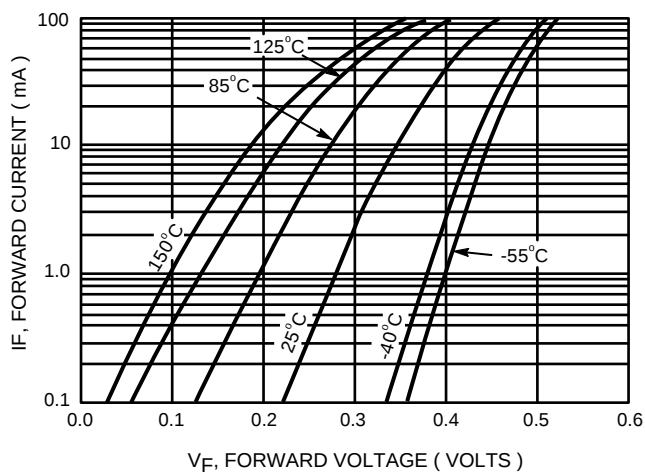


FIGURE 3. LEAKAGE CURRENT

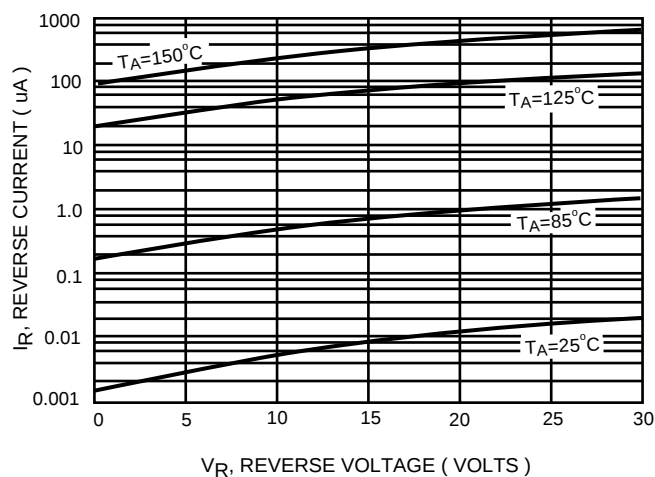


FIGURE 4. TOTAL CAPACITANCE

