

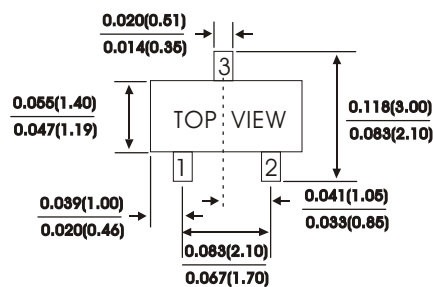
BAT54 THRU BAT54S

SMALL SIGNAL SCHOTTKY BARRIER DIODES

FEATURES:

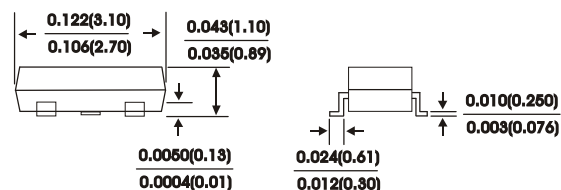
- Extremely fast switching speed
- Very small conduction losses
- Schottky barrier diodes encapsulated in a SOT-23 PACKAGE
- Low forward voltage
- High speed switching applications circuit protection

SOT-23



MECHANICAL DATA

Case : SOT-23 molded plastic



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase half wave, 60 Hz resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	BAT54	BAT54A	BAT54C	BAT54S	Units
Maximum reverse voltage	V_R	30	30	30	30	Volts
Minimum reverse breakdown voltage $I_R = 10\mu A$	$V_{(BR)R}$	30				Volts
Maximum average forward rectified current	$I_{(AV)}$	0.2				Amps
Maximum Peak repetitive forward current rated V_R , square wave, 20KHZ (Per leg)	I_{FRM}	0.4				Amps
Maximum instantaneous forward voltage (Per leg)	V_F	IF=0.1mA: 0.24 IF=1.0mA: 0.32 IF=10mA: 0.40 IF=30mA: 0.50 IF=100mA: 1.00				Volts
Maximum reverse current at $V_R = 25V$ (Per leg)	I_R	2.0				μA
Maximum reverse recovery time (NOTE 1) (Per leg)	T_{RR}	5.0				nS
Maximum total capacitance (NOTE 2)	C_T	10				P_F
Operating junction temperature range	T_J	-55to+125				°C
Storage temperature range	T_{Stg}	-55to+150				°C


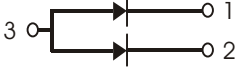
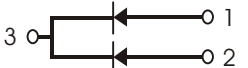
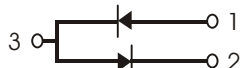
NOTES:

(1) Reverse Recovery Test CONDITION : $I_F = I_R = 10mA$, $I_R(REC) = 1.0mA$

(2) Measured at 1MHZ and reverse Voltage of 1.0V

RATINGS AND CHARACTERISTIC CURVES BAT54 THRU BAT54S

Device Marking

Item	Marking	Equivalent Circuit diagram
BAT54	LV 3	
BAT54A	B 6	
BAT54C	KV 3	
BAT54S	LD 3	

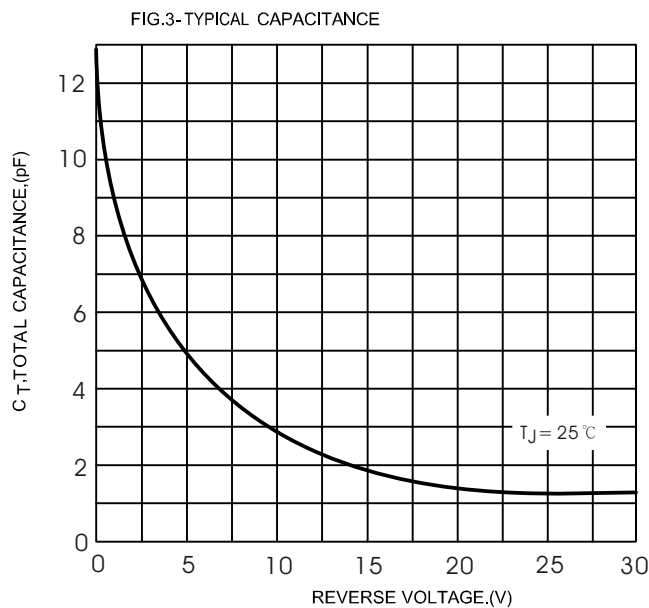
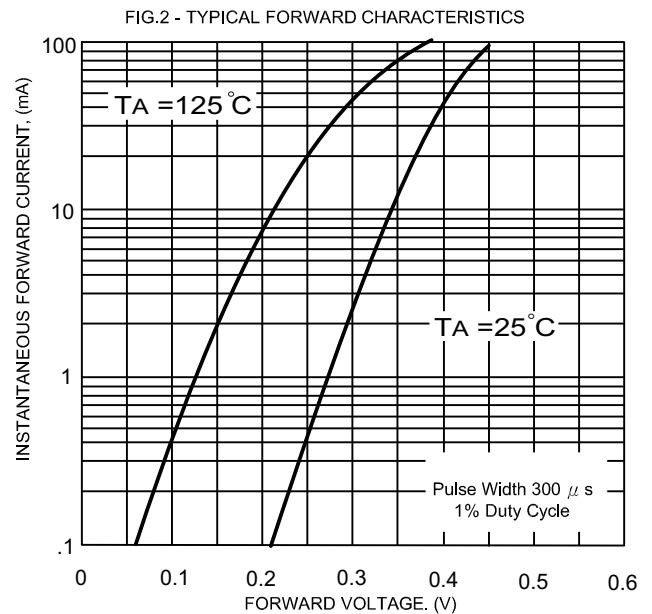
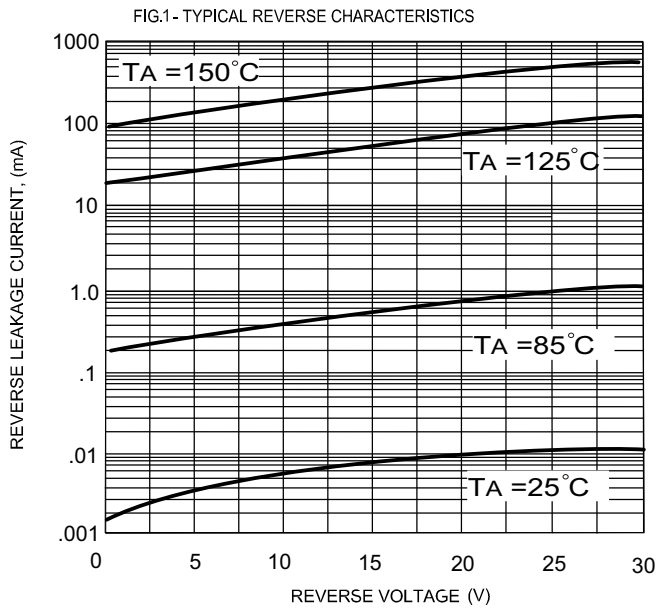
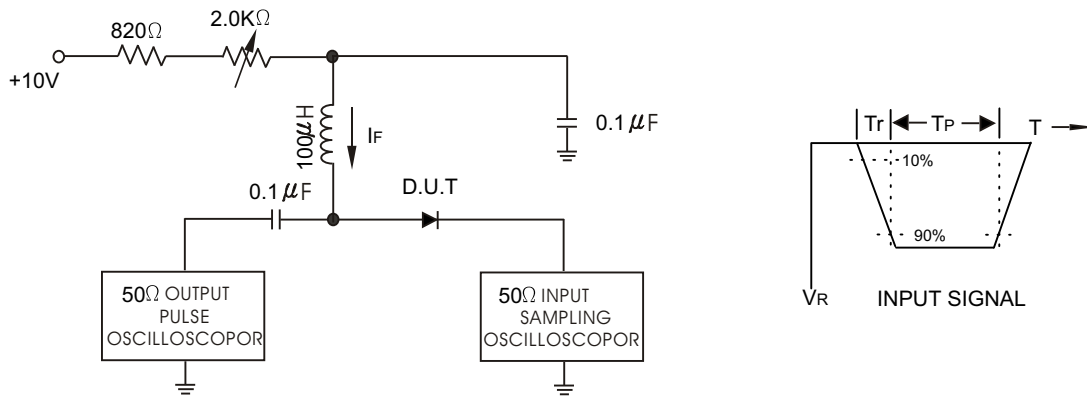
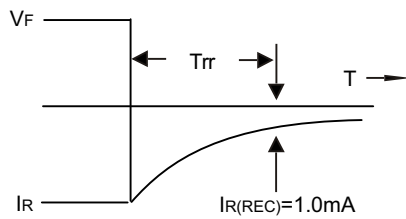


Figure 4 Recovery Test equivalent Circuit



- NOTES :
1. A 2.0K Variable resistor for forward current (I_F) of 10mA
 2. Input pulses is adjusted so $I_{R(\text{peak})}$ is equal to 10mA
 3. $t_p \approx t_{rr}$



OUTPUT PULSE

($I_F = I_R = 10\text{mA}$, MEASURED
at $I_{R(\text{REC})} = 1.0\text{mA}$)