



SMALL SIGNAL SCHOTTKY BARRIER DIODES

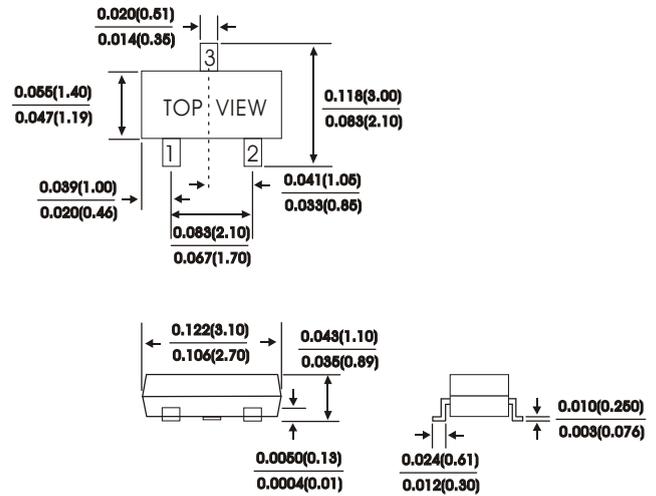
FEATURES:

- 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

MECHANICAL DATA

Case : SOT-23 molded plastic

SOT-23



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)	$V_F$		0.24 0.32 0.40 0.50 1.00			Volts
Maximum reverse current at $V_R=25V$ (Per leg)	$I_R$		2.0			$\mu A$
Maximum reverse recovery time (NOTE 1) (Per leg)	$T_{RR}$		5.0			nS
Maximum total capacitance (NOTE 2)	$C_T$		10			P <sub>F</sub>
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

Device Marking

Item	Marking	Equivalent Circuit diagram
BAT54	LV 3,L4	
BAT54A	B 6	
BAT54C	KV 3	
BAT54S	LD 3	

FIG.1- TYPICAL REVERSE CHARACTERISTICS

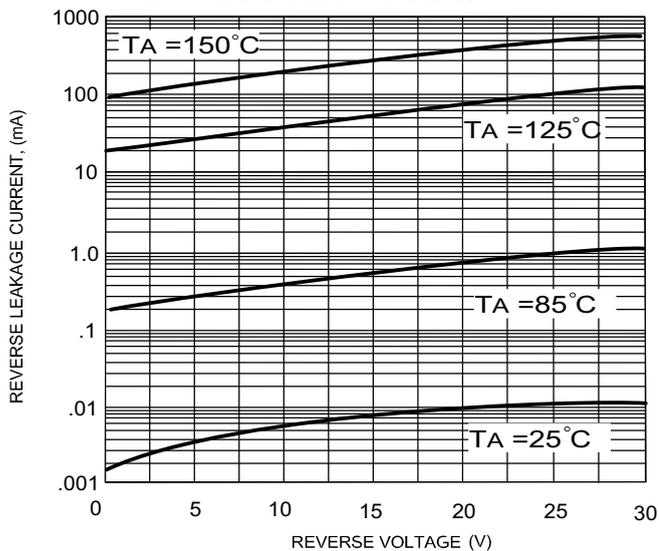


FIG.2 - TYPICAL FORWARD CHARACTERISTICS

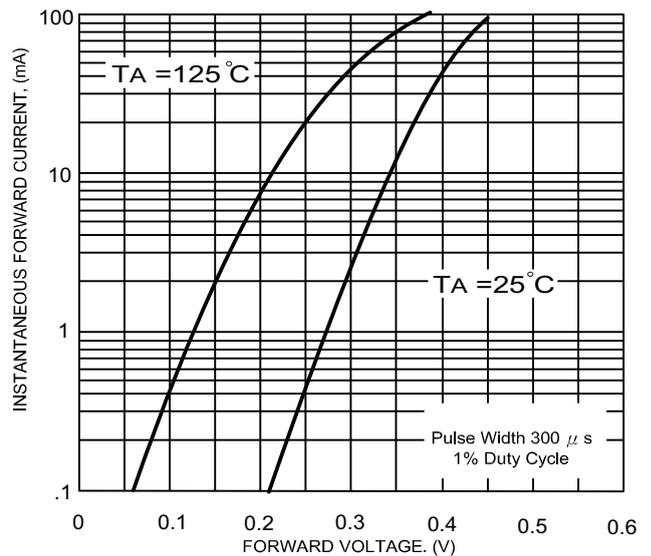
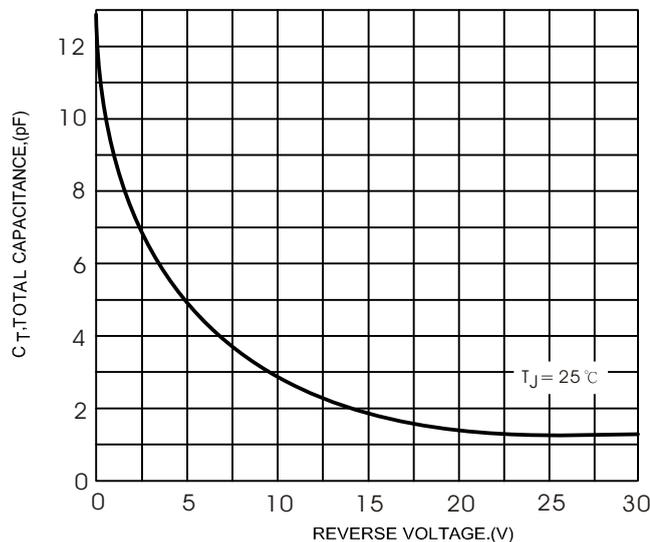


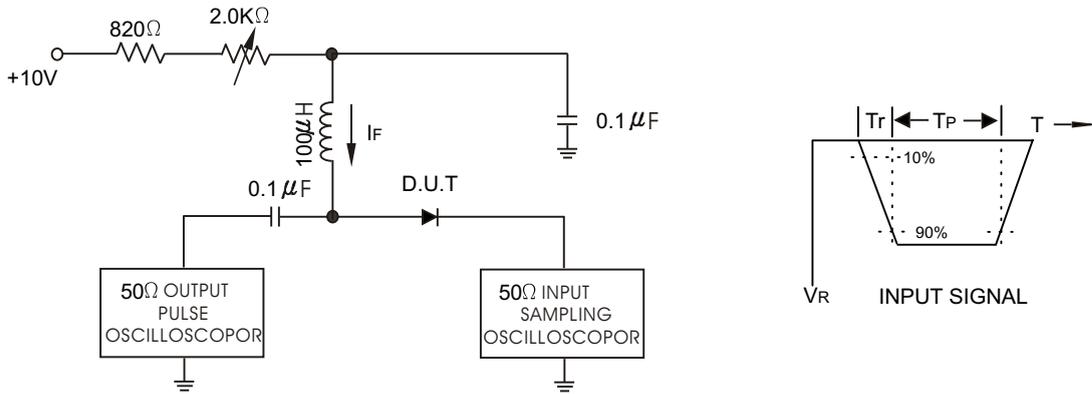
FIG.3-TYPICAL CAPACITANCE



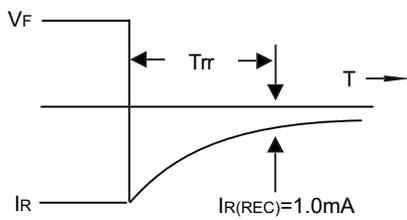


RATINGS AND CHARACTERISTIC CURVES

Figure 4 Recovery Test equivalent Circuit



- NOTES : 1.A 2.0K Variable resistor for forward current ( $I_F$ ) of 10mA  
 2.Input pules is adjusted so  $I_{R(peak)}$  is equal to 10mA  
 3.tp" trr



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



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