

Surface Mount Schottky Barrier Diodes

 Lead(Pb)-Free

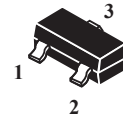
Features:

- *Extremely Fast Switching Speed
- *Low Forward Voltage
- *Very Small Conduction Losses
- *Schottky Barrier Diodes Encapsulated in a SOT-23 Package

Description:

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.

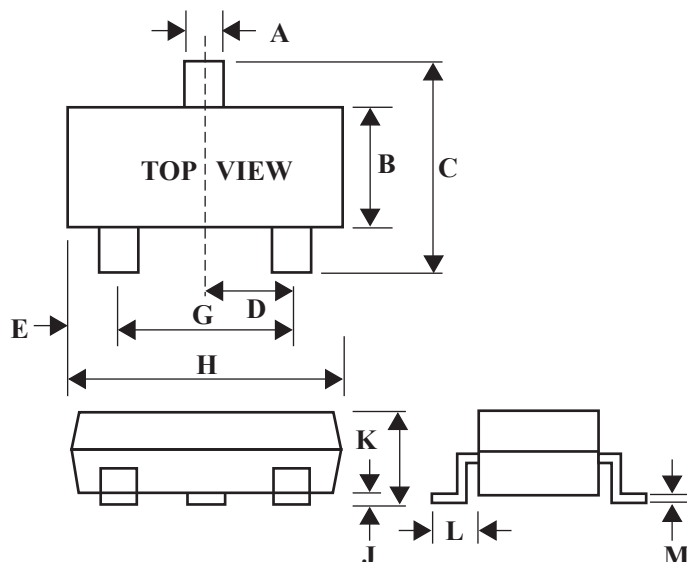
**SMALL SIGNAL
SCHOTTKY DIODES
200m AMPERES
30 VOLTS**



SOT-23

SOT-23 Outline Dimensions

Unit:mm



Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25


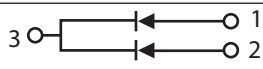
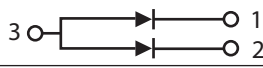
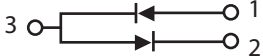
Maximum Ratings (T_J=125°C Unless otherwise noted)

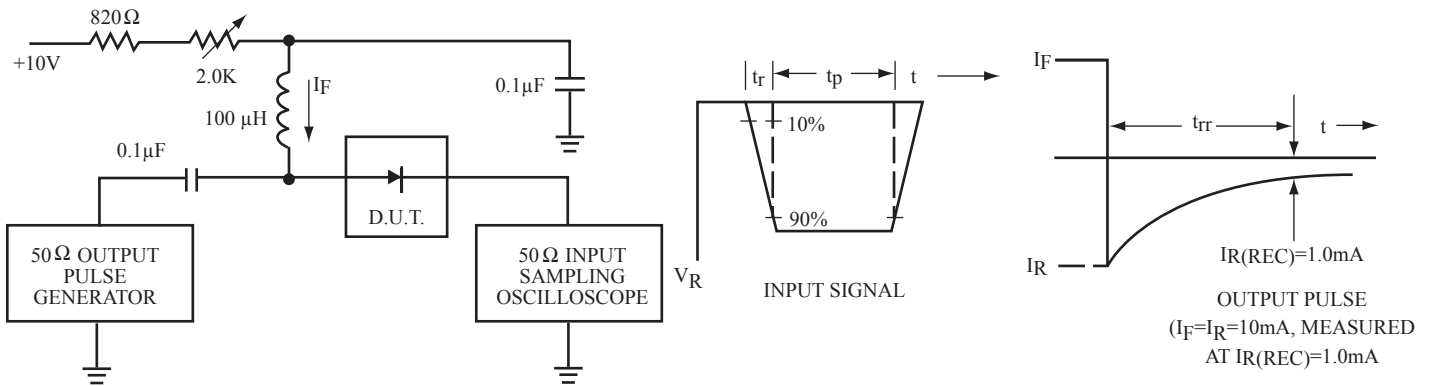
Characteristic	Symbol	BAT54/C/A/S	Unit
Reverse Voltage	V _R	30	Volts
Average Rectifier Forward Current	I _{F(AV)}	200	mA
Peak Repetitive Forward Current Rated V _R , Square Wave, 20KHz	I _{FRM}	400	mA
Operating Junction Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics (T_A=25°C Unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I _R =10uA)	V _{(BR)R}	30			Volts
Forward Voltage I _F =0.1mA I _F =1.0mA I _F =10mA I _F =30mA I _F =100mA	V _F		0.22 0.29 0.35 0.41 0.52	0.24 0.32 0.40 0.50 1.00	Volts
Total Capacitance (V _R =1.0V, f=1.0MHz)	C _T		7.6	10	Pf
Reverse Leakage V _R =25V	I _R		0.5	2.0	uAdc
Reverse Recover Time I _F =I _R =10mA, I _{R(Rec)} =1.0mA	T _{rr}			5.0	nS

Device Marking

Item	Marking	Equivalent Circuit diagram
BAT54	LV3	
BAT54C	KL3	
BAT54A	B6	
BAT54S	LD3	



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

FIG.1 Recovery Time Equivalent Test Circuit

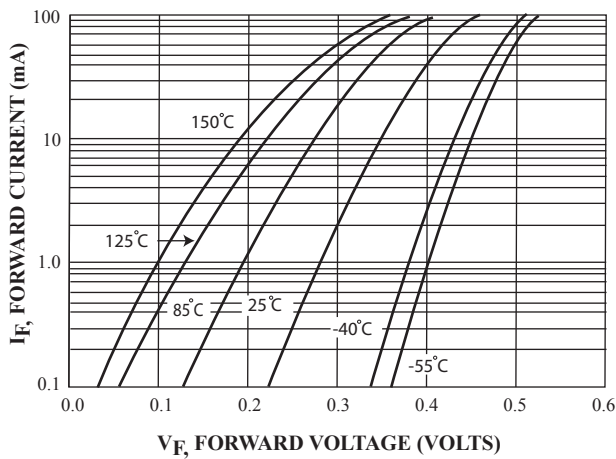


FIG.2 Forward Voltage

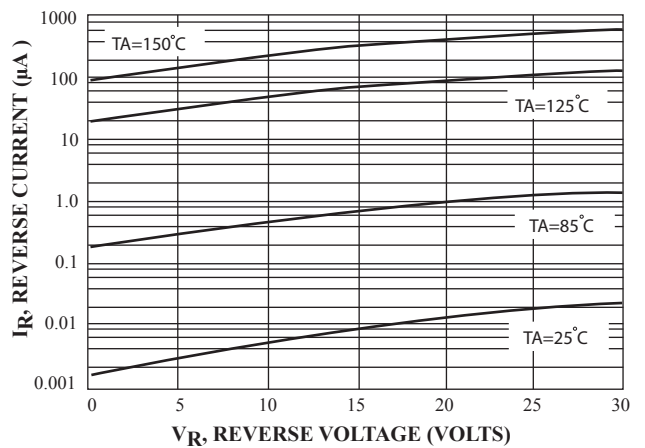


FIG.3 Leakage Current

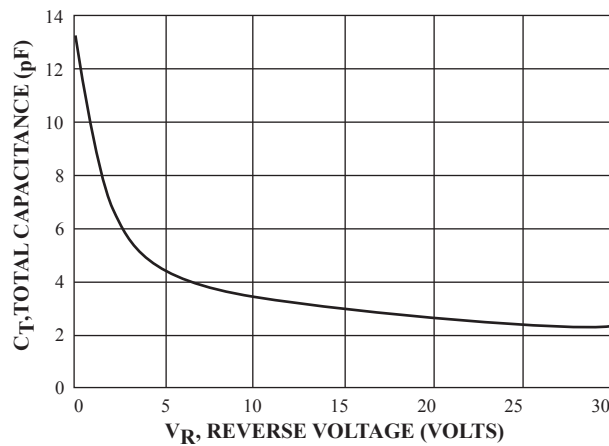


FIG.4 Total Capacitance