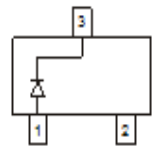
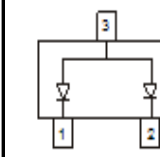
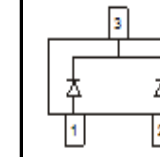
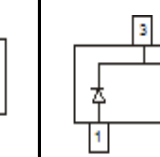


Small Signal Schottky Barrier Rectifiers



SOT-323

Marking information			
BAT54W	BAT54AW	BAT54CW	BAT54SW
			
KL5,L4	KL6,L42	KL7,L43	KL8,L44

Features
<ul style="list-style-type: none"> • Low Turn-on Voltage • Fast Switching • PN Junction Guard Ring for Transient and ESD Protection

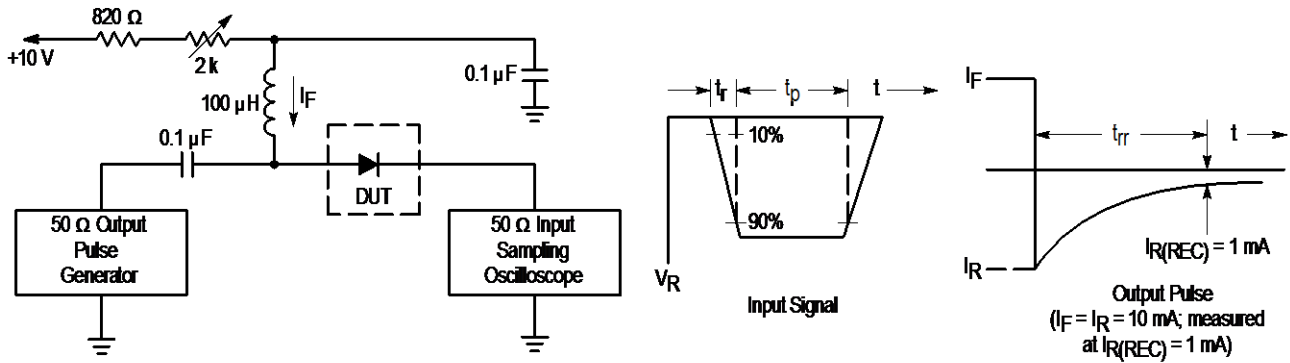
Mechanical Data
<ul style="list-style-type: none"> • Case: SOT-323, Molded Plastic • Terminals: Solderable per MIL-STD-202, Method 208 • Polarity: See Diagrams Below • Weight: 0.006 grams (approx.) • Mounting Position: Any

Maximum Ratings (T _A =25°C unless otherwise noted)			
Rating	Symbol	Limits	Unit
Reverse Voltage	V _R	30	V
Forward Power Dissipation @ T _A = 25°C Derate above 25°C	P _F	225 1.8	mW mW / °C
Forward Current (DC)	I _F	200	mA
Junction Temperature	T _J	125	°C
Storage Temperature Range	T _{stg}	-55 ~ 150	°C

Electrical Characteristics (T _A =25°C unless otherwise noted)						
Characteristic	Conditions	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage	(I _R = 10 uA)	V _{(BR)R}	30	-	-	Volts
Total Capacitance	(V _R = 1.0 V, f = 1.0 MHz)	C _T	-	7.6	10	pF
Reverse Leakage	(V _R = 25 V)	I _R	-	0.5	2	uAdc
Forward Voltage	(I _F = 0.1 mAdc)	V _F	-	0.22	0.24	Vdc
Forward Voltage	(I _F = 30 mAdc)	V _F	-	0.41	0.5	Vdc
Forward Voltage	(I _F = 100 mAdc)	V _F	-	0.52	1	Vdc
Reverse Recovery Time(Fig.1)	(I _F = I _R = 10 mAdc, I _{R(REC)} = 1.0 mAdc)	trr	-	-	5	ns
Forward Voltage	(I _F = 1.0 mAdc)	V _F	-	0.29	0.32	Vdc
Forward Voltage	(I _F = 10 mAdc)	V _F	-	0.35	0.4	Vdc
Forward Current (DC)		I _F	-	-	200	mAdc
Repetitive Peak Forward Current		I _{FRM}	-	-	300	mAdc
Non-Repetitive Peak Forward Current	(t < 1.0 s)	I _{FSM}	-	-	600	mAdc

Small Signal Schottky Barrier Rectifiers

Rating and Characteristics Curves



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

Figure 1. Recovery Time Equivalent Test Circuit

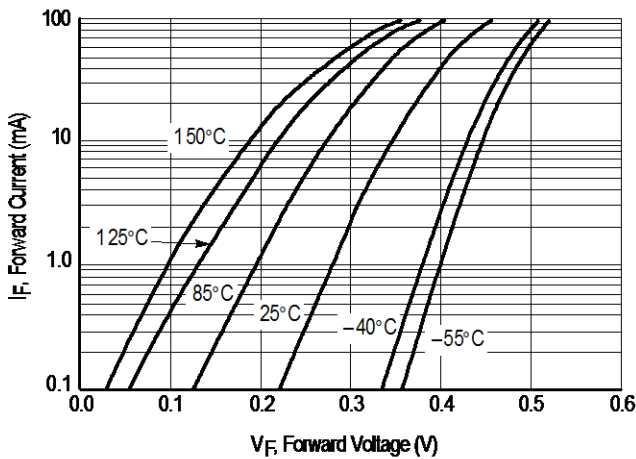


Figure 2. Forward Voltage

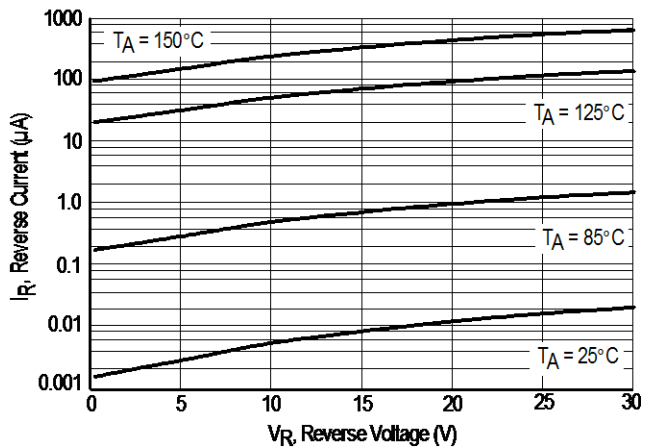


Figure 3. Leakage Current

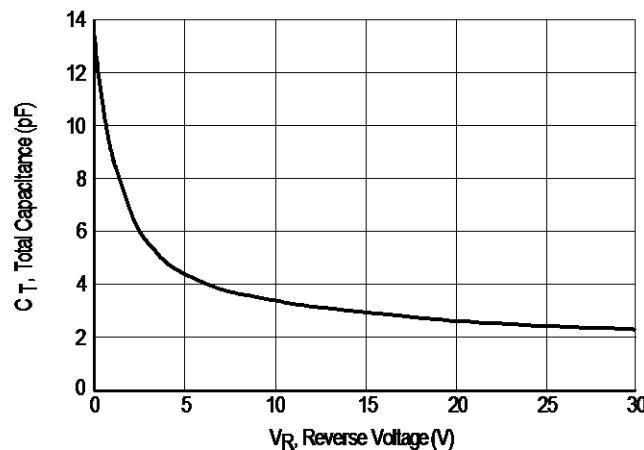
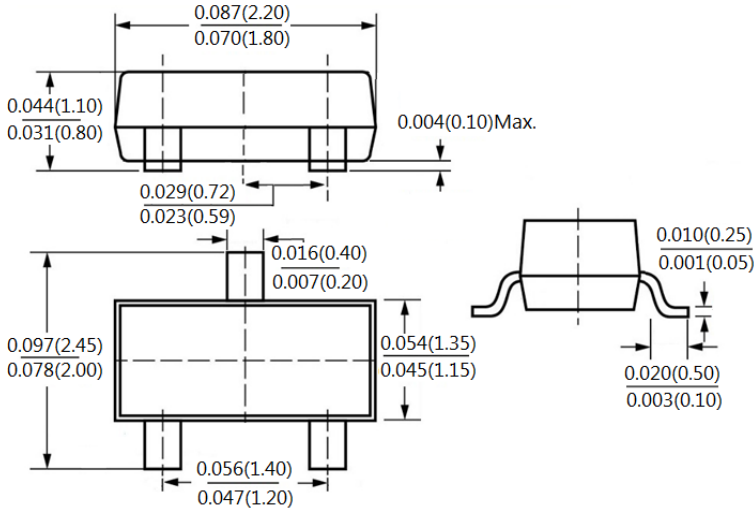


Figure 4. Total Capacitance

Small Signal Schottky Barrier Rectifiers

Package Outline Dimensions

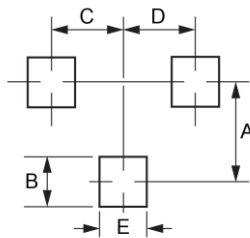


SOT-323

Dimensions in inches and (millimeters)

Suggested Pad Layout

Outline Symbol	SOT-323 millimeters
A	2.60
B	1.40
C	0.95
D	0.95
E	0.90



Tape & Reel Specification

Item	Symbol	Dimension millimeters
Carrier width	A	2.2 ±0.12
Carrier length	B	2.4 ±0.16
Carrier depth	C	1.15 ±0.13
Sprocket hole	d	1.55 ±0.11
Reel outside diameter	D	178 ±0.14
Reel inner diameter	D1	60 ±0.12
Feed hole width	D2	13 ±0.14
Sprocket hole position	E	1.75 ±0.10
Punch hole position	F	3.50 ±0.05
Punch hole pitch	P	4.00 ±0.17
Sprocket hole pitch	P0	4.00 ±0.11
Embossment center	P1	2.00 ±0.05
Tape width	W	8.0 ±0.12
Reel width	W1	9.0 ±0.13

