



DESCRIPTION

The BAT54AW available in SOT-323 Package

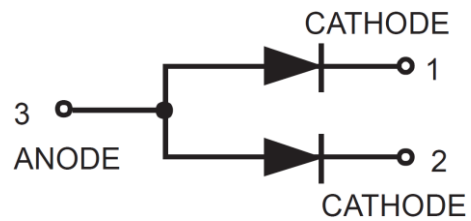
FEATURES

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

ORDERING INFORMATION

Package Type	Part Number
SOT-323	BAT54AW
Note	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise noted

V _R , Reverse Voltage	30V
P _F , Forward Power Dissipation	
@T _A = 25°C	200mW
Derate above 25°C	1.6mW/°C
I _F , Forward Current (DC)	200mA
T _J , Junction Temperature	125 °C
T _{STG} , Storage Temperature Range	-55°C ~ +150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

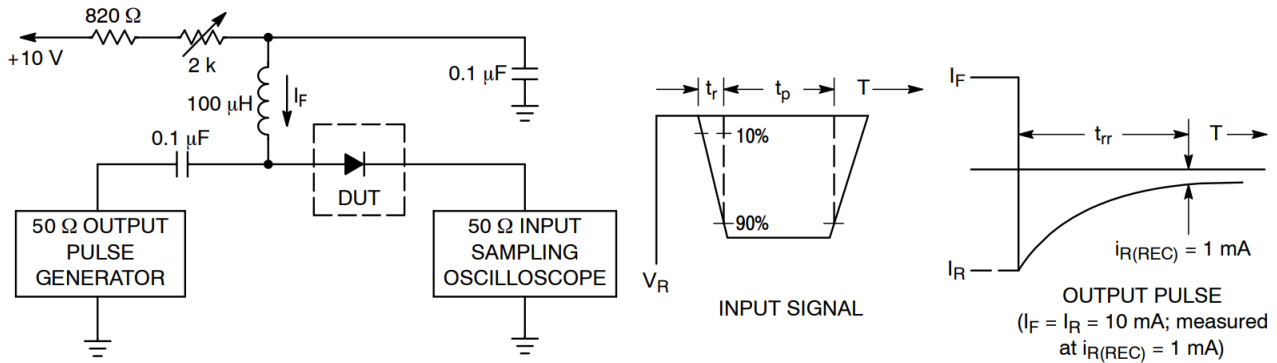
T_A = 25°C, unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Reverse Breakdown Voltage	V _{(BR)R}	I _R =10μA	30	-	-	V
Total Capacitance	C _T	V _R =1.0V, f=1.0MHz	-	-	10	pF
Reverse Current	I _R	V _R =25V	-	0.5	2.0	μA _{dc}
Forward Voltage	V _F	I _F =0.1mA _{dc}	-	0.22	0.24	V _{dc}
		I _F =30mA _{dc}	-	0.41	0.5	V _{dc}
		I _F =100mA _{dc}	-	0.52	1.0	V _{dc}
		I _F =1.0mA _{dc}	-	0.29	0.32	V _{dc}
		I _F =10mA _{dc}	-	0.35	0.40	V _{dc}
Reverse Recovery Time	t _{rr}	I _F =I _R =10mA, I _{R(REC)} =1.0mA _{dc} Figure 1.	-	-	5.0	ns
Forward Current (DC)	I _F		-	-	200	mA _{dc}
Repetitive Peak Forward Current	I _{FRM}		-	-	300	mA _{dc}
Non-Repetitive Peak Forward Current	I _{FSM}	t<1.0s	-	-	600	mA _{dc}



TYPICAL CHARACTERISTICS

Fig.1 Recovery Time Equivalent Test Circuit



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

Fig.2 Forward Characteristics

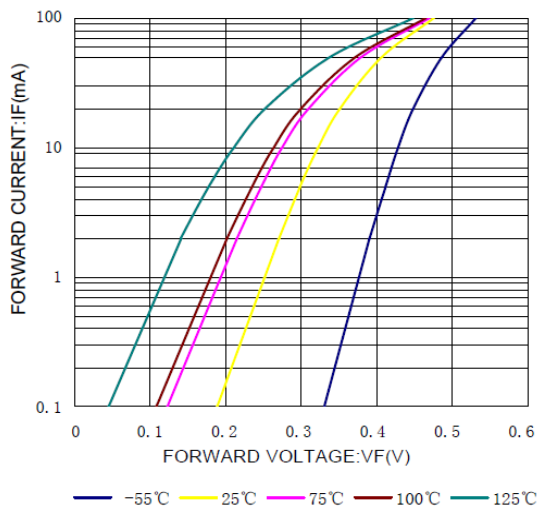


Fig.3 Reverse Characteristics

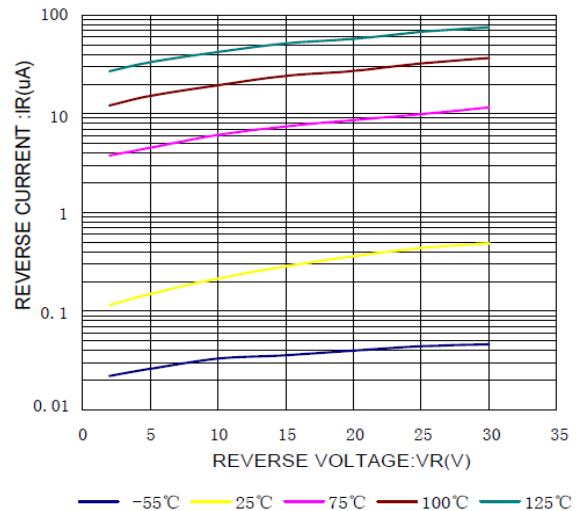
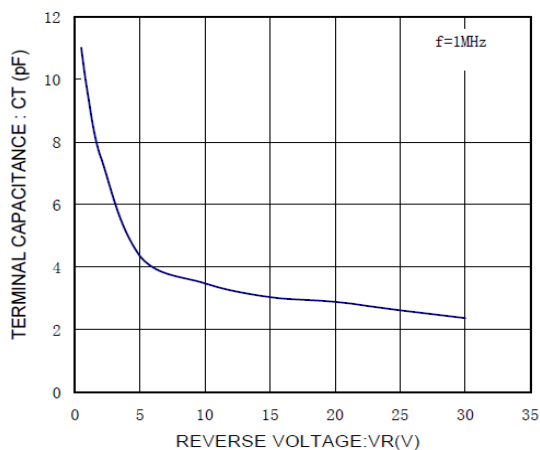


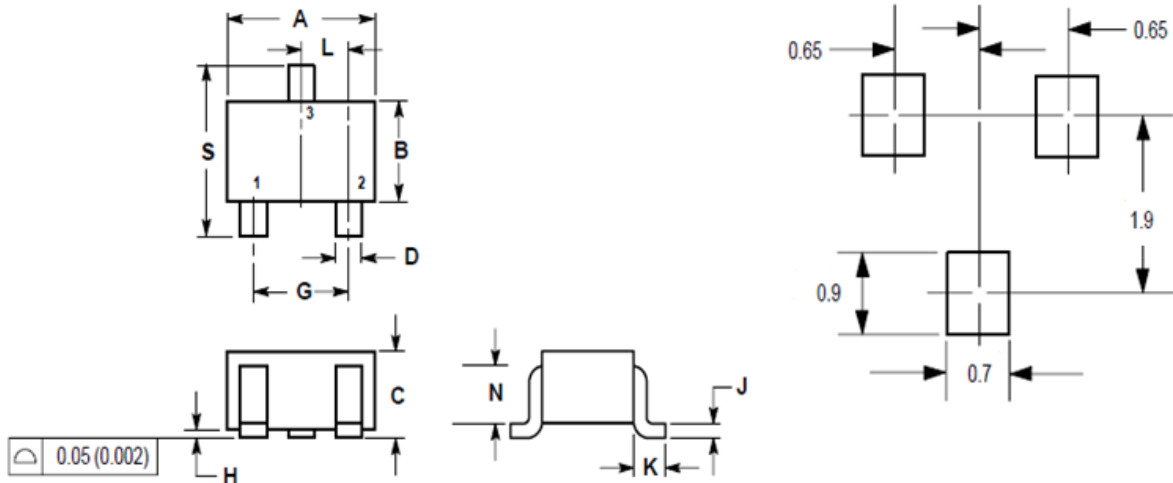
Fig.4 VR-CT Characteristics





PACKAGE INFORMATION

Dimension in SOT-323 Package (Unit: mm)



Symbol	Min.	Max.
A	1.800	2.200
B	1.150	1.350
C	0.800	1.000
D	0.300	0.400
G	1.200	1.400
H	0.000	0.100
J	0.100	0.250
K	0.425 REF	
L	0.650 BSC	
N	0.700 REF	
S	2.000	2.400



IMPORTANT NOTICE

AiT Semiconductor Inc. (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Semiconductor Inc.'s integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or server property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Semiconductor Inc. assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.