



## 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.

The BAT54W available in SC-70 package

## FEATURES

- Extremely Fast Switching Speed
- Low Forward Voltage — 0.35 Volts (Typ)  
@  $I_F = 10\text{mA}$
- Available in SC-70 package

## ORDERING INFORMATION

Package Type	Part Number
SC-70	BAT54W
Note	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

## PIN DESCRIPTION





## ABSOLUTE MAXIMUM RATINGS

T<sub>J</sub> =125°C, unless otherwise noted

V <sub>R</sub> , Reverse Voltage	30V
P <sub>F</sub> , Forward Power Dissipation @T <sub>A</sub> = 25°C Derate above 25°C	200mW 1.6mW/°C
I <sub>F</sub> , Forward Current(DC)	200mA
T <sub>J</sub> , Junction Temperature	125 °C
T <sub>STG</sub> , Storage Temperature Range	-55°C ~ +150°C
R <sub>θJA</sub> , Thermal Resistance Junction-to-Ambient	625°C/W

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<sub>A</sub> = 25°C, unless otherwise noted

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



## TYPICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$

Figure 1. Forward Characteristics

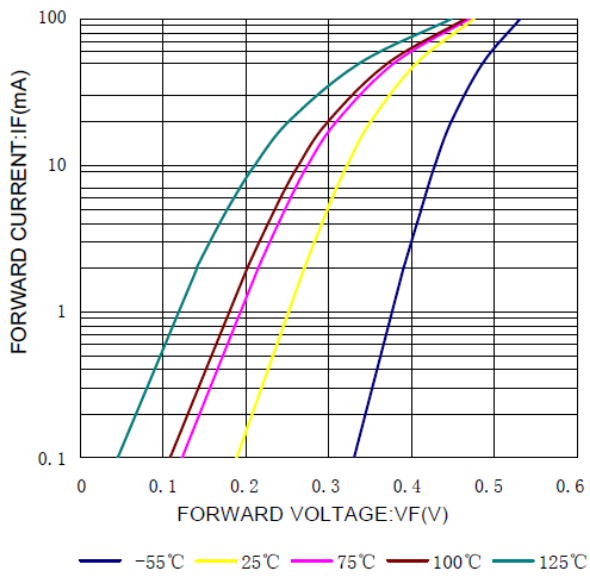


Figure 2. Reverse Characteristics

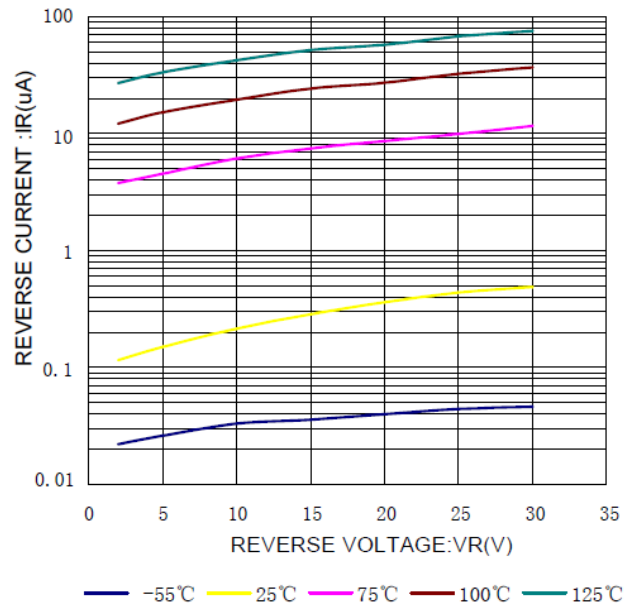
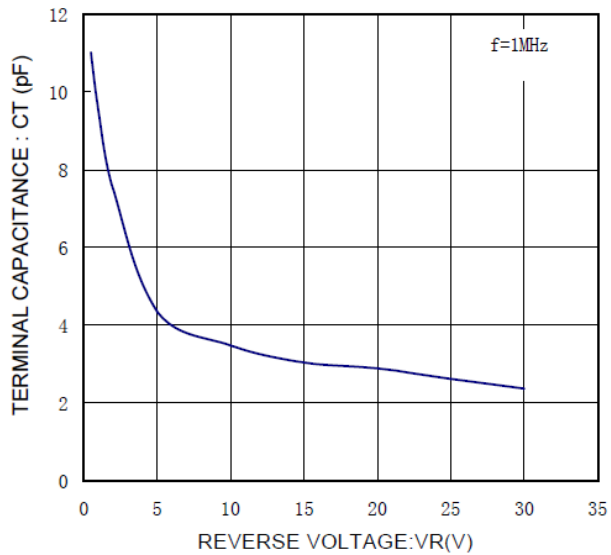


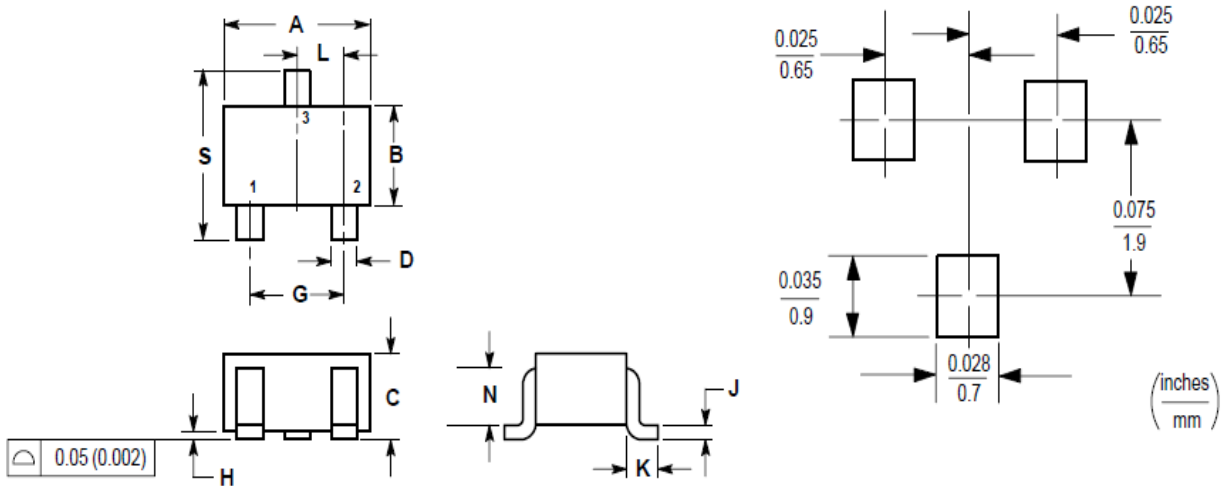
Figure 3. VR-CT Characteristics





**PACKAGE INFORMATION**

Dimension in SC-70 Package (Unit: mm)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.80	2.20	0.071	0.087
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.032	0.040
D	0.30	0.40	0.012	0.016
G	1.20	1.40	0.047	0.055
H	0.00	0.10	0.000	0.004
J	0.10	0.25	0.004	0.010
K	0.425 REF		0.017 REF	
L	0.650 BSC		0.026 BSC	
N	0.700 REF		0.028 REF	
S	2.00	2.40	0.079	0.095



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