

**Small Signal Product**
**200mW Surface Mount Schottky Barrier Diode**
**FEATURES**

- Fast switching speed
- Low forward voltage
- Surface mount device type
- Moisture sensitivity level 1
- Pb free and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code
- Ultra high-speed swithing
- Voltage clamping
- Protection circuits


**SOT-323**

**MECHANICAL DATA**

- Case: SOT-323 small outline plastic package
- High temperature soldering guaranteed: 260°C/10s
- Weight: 5mg (approximately)

<b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted)			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>VALUE</b>	<b>UNIT</b>
Peak Repetitive Reverse Voltage	$V_{RRM}$	30	V
Reverse Voltage	$V_R$	30	V
Forward Current	$I_F$	200	mA
Repetitive Peak Forward Current	$I_{FRM}$	300	mA
Peak Forward Surge Current (tp=10ms)	$I_{FSM}$	600	mA
Total Power Dissipation	$P_{tot}$	200	mW
Thermal Resistance form Junction Ambient	$R_{thjA}$	625	K/W
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 55 to + 150	$^\circ\text{C}$

<b>PARAMETER</b>	<b>SYMBOL</b>	<b>MIN</b>	<b>MAX</b>	<b>UNIT</b>	
Reverse Breakdown Voltage	$V_{(BR)R}$	30	--	V	
Forward Voltage	$V_F$	at $I_F = 0.1 \text{ mA}$	--	240	mV
		at $I_F = 1 \text{ mA}$	--	320	
		at $I_F = 10 \text{ mA}$	--	400	
		at $I_F = 30 \text{ mA}$	--	500	
		at $I_F = 100 \text{ mA}$	--	1000	
Reverse Current	$I_R$	--	2.0	$\mu\text{A}$	
Total Capacitance	$C_T$	--	10	pF	
Reverse Recovery Time	$t_{rr}$	--	5	ns	

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**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

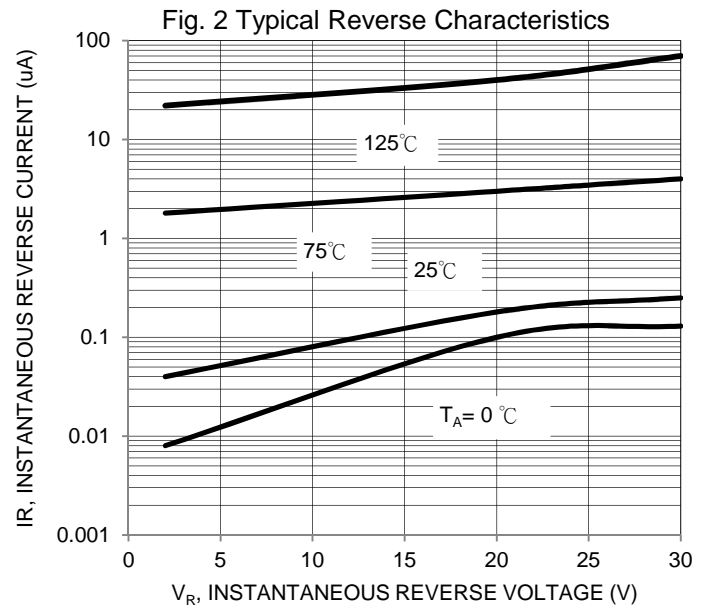
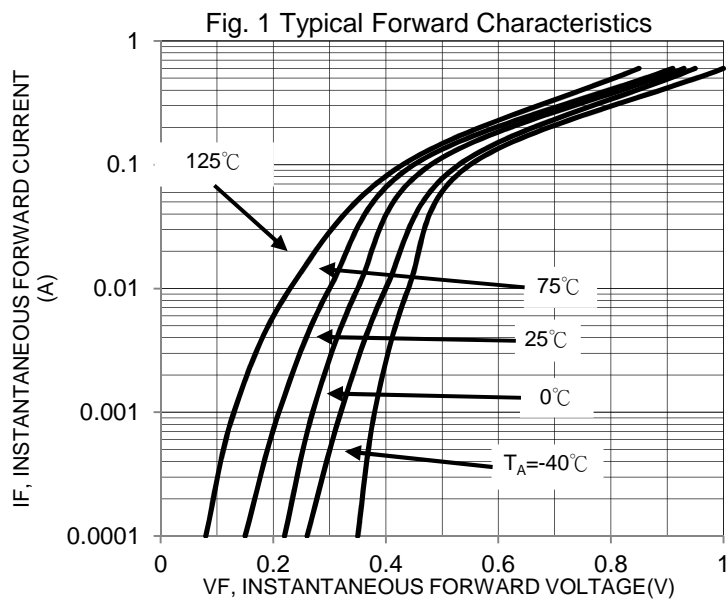


Fig. 3 Typical Capacitance v.s. VR

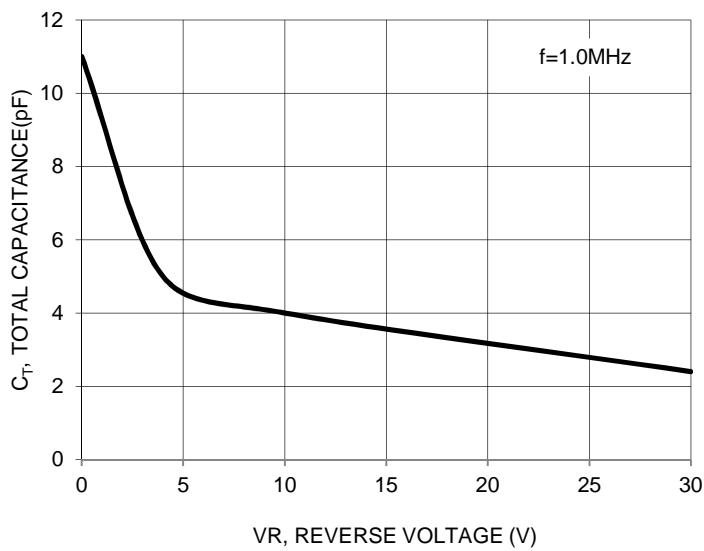
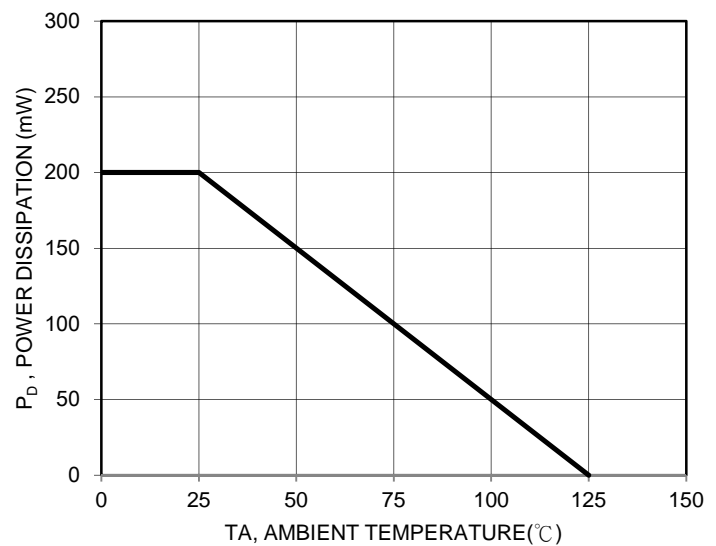


Fig. 4 Power Derating Curve



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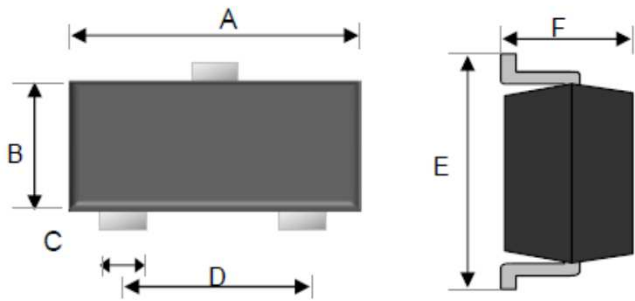
<b>ORDERING INFORMATION</b>						
<b>PART NO.</b>	<b>MANUFACTURE CODE</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>	<b>MARKING</b>
BAT54W	(Note)	RF	G	SOT-323	3K / 7" Reel	L4
BAT54AW		RF	G	SOT-323	3K / 7" Reel	L42
BAT54CW		RF	G	SOT-323	3K / 7" Reel	L43
BAT54SW		RF	G	SOT-323	3K / 7" Reel	L44

Note: Manufacture special control, if empty means no special control requirement.

<b>EXAMPLE</b>					
<b>PREFERRED P/N</b>	<b>PART NO.</b>	<b>MANUFACTURE CODE</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>DESCRIPTION</b>
BAT54W RFG	BAT54W		RF	G	Green compound
BAT54W-B0 RFG	BAT54W	B0	RF	G	Green compound

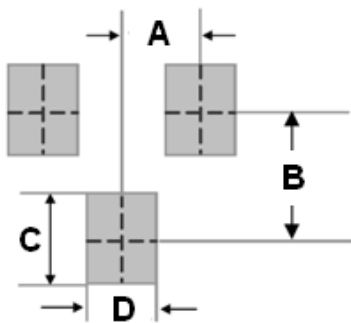
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**DIMENSIONS**



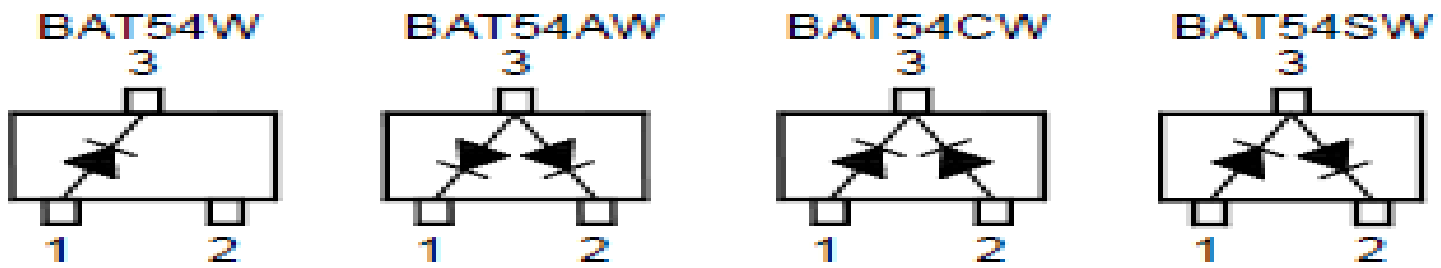
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.80	2.20	0.07	0.09
B	1.15	1.35	0.05	0.05
C	0.15	0.40	0.01	0.02
D	1.20	1.40	0.05	0.06
E	2.00	2.45	0.08	0.10
F	0.80	1.10	0.03	0.04

**SUGGESTED PAD LAYOUT**



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	0.65	0.026
B	1.6	0.063
C	0.8	0.031
D	0.8	0.031

**PIN CONFIGURATION**



**Small Signal Product****Notice**

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