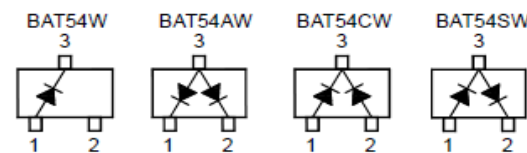


**Features**

- ◇ Fast switching speed
- ◇ Surface device type mounting
- ◇ Moisture sensitivity level 1
- ◇ Pb free version and RoHS compliant
- ◇ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code
- ◇ Low forward voltage


**Mechanical Data**

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


**Application**

- ◇ Ultra high-speed swithing
- ◇ Voltage clamping
- ◇ Protection circuits

**Ordering Information (example)**

Part No.	Package	Packing	Packing code	Packing code (Green)	Manufacture code
BAT54W	SOT-323	3K / 7" Reel	RF	RFG	B0

Note : Detail please see "Ordering Information(detail, example)" below.

**Maximum Ratings and Electrical Characteristics**

Rating at 25 °C ambient temperature unless otherwise specified.

Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ )

Parameter	Symbol	Value	Units
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 ( $t_p=10\text{ms}$ )	$I_{FSM}$	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	$T_{STG}$	- 65 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Units
Forward Voltage	$V_F$	-	240	mV
at $I_F = 0.1 \text{ mA}$				
at $I_F = 1 \text{ mA}$				
at $I_F = 10 \text{ mA}$				
at $I_F = 30 \text{ mA}$				
at $I_F = 100 \text{ mA}$	-	1000		
Reverse Breakdown Voltage	$V_{(BR)R}$	30	-	V
at $I_R = 100 \text{ uA}$				
Reverse Current	$I_R$	-	2	$\text{uA}$
at $V_R = 25 \text{ V}$				
Total Capacitance	$C_T$	-	10	pF
at $V_R = 1 \text{ V}, f = 1 \text{ MHz}$				
Reverse Recovery Time	$t_{rr}$	-	5	ns
at $I_F = 10 \text{ mA}$ through $I_R = 10 \text{ mA}$ to $I_R = 1 \text{ mA}, R_L = 100 \text{ }\Omega$				

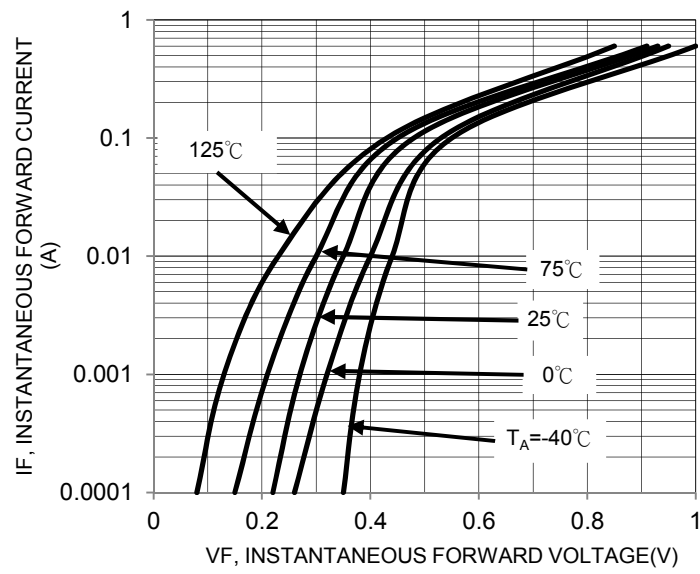


Fig. 3 Typical Capacitance v.s. VR

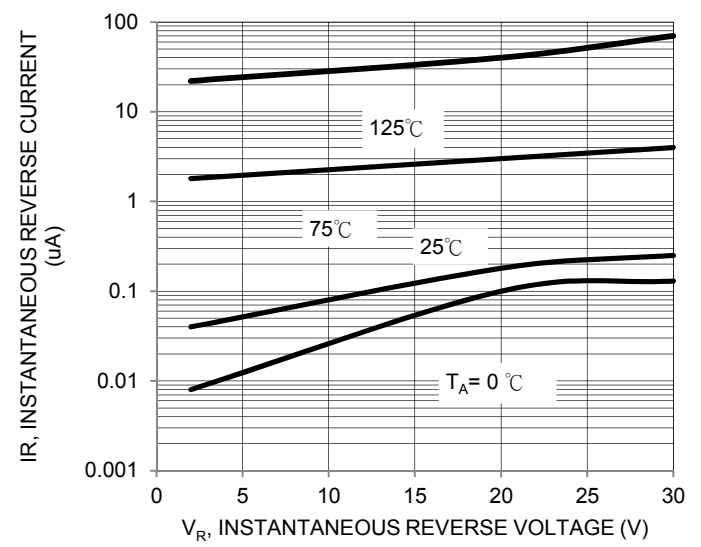
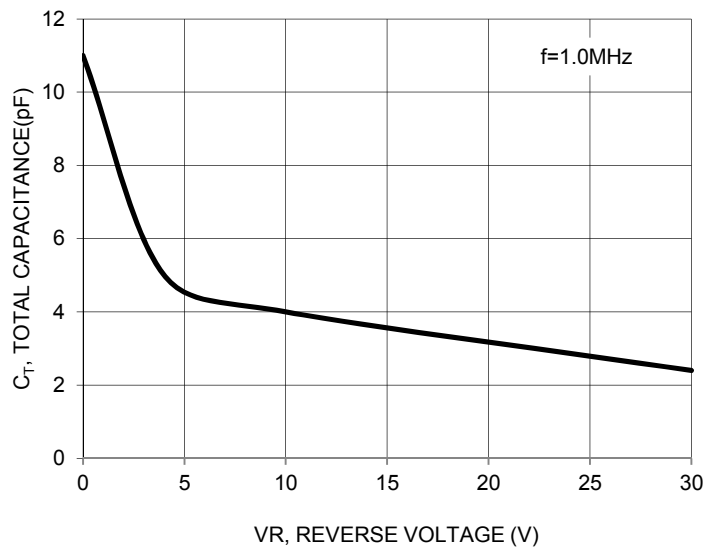
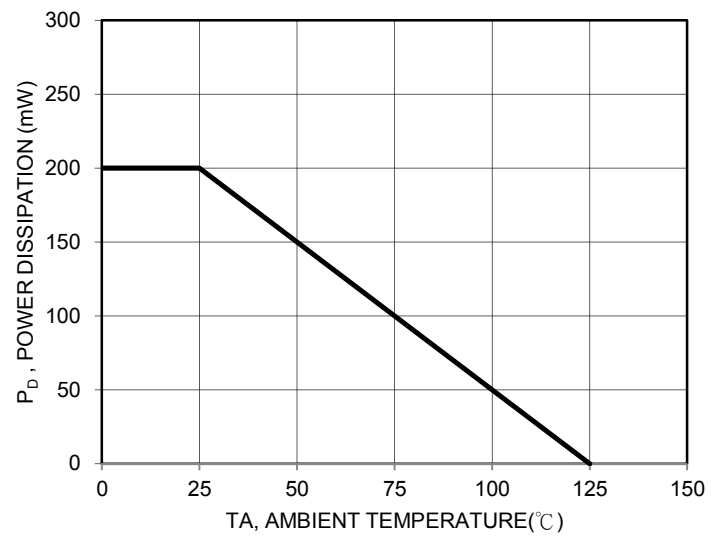


Fig. 4 Power Derating Curve



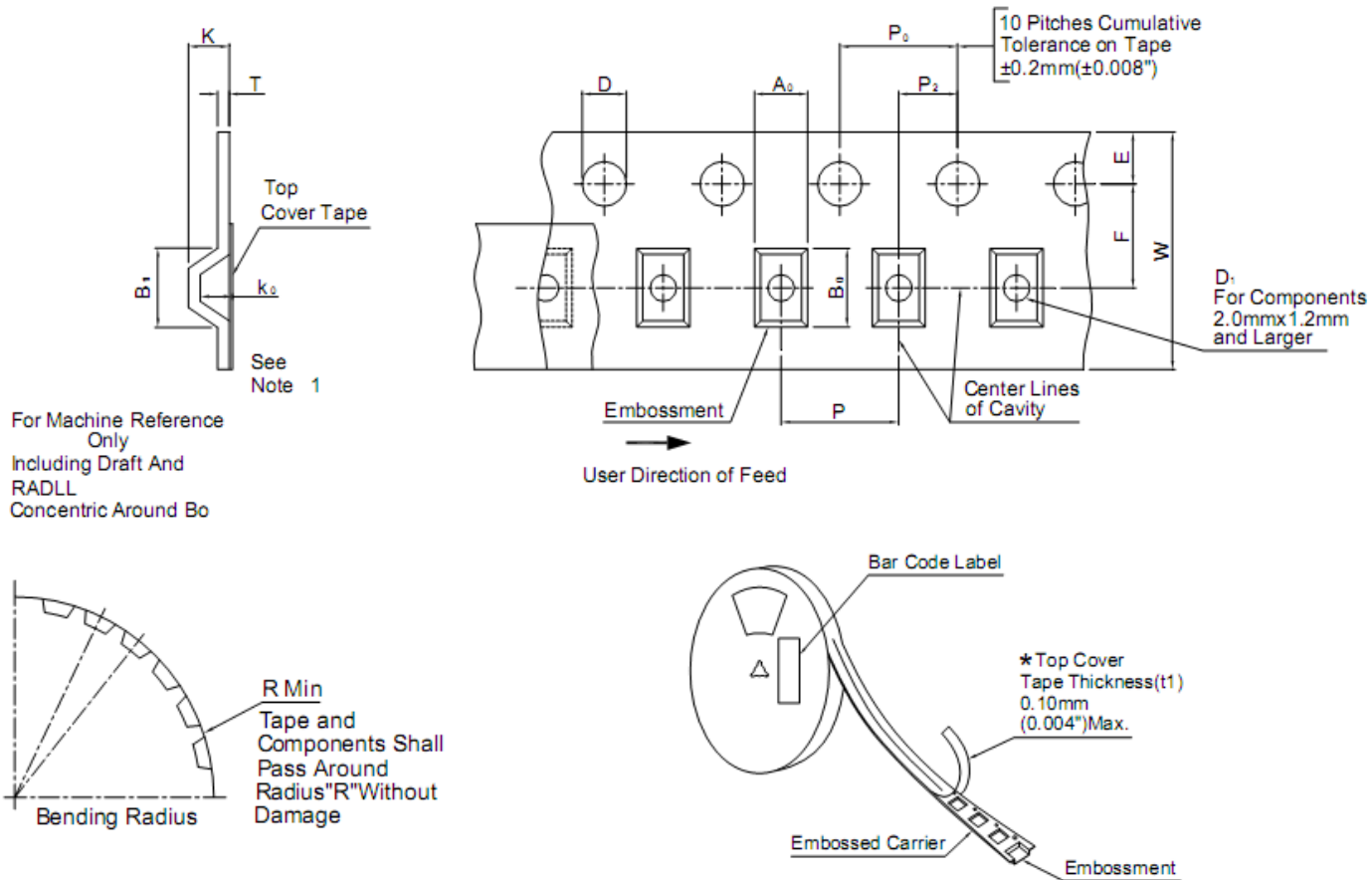
**Ordering information (Detail, example)**

Part No.	Package	Packing	Packing code	Packing code (Green)	Manufacture code
BAT54xx (Note1)	SOT-323	3K / 7" REEL	RF	RFG	(Note 2)
BAT54W	SOT-323	3K / 7" REEL	RF	RFG	
BAT54W	SOT-323	3K / 7" REEL	RF	RFG	B0

Note 1: "xx" is Device Code from "W" thru "SW".

Note 2: Manufacture special control, if empty means no special control requirement.

**Tape & Reel specification**



Tape Size	B1	D	D1	E	F	K	P0	P2	R
	max	+0.1;-0	min	±1.0	±0.05	max	±0.1	±0.1	min
8 mm	4.55	1.5	1	1.75	3.5	2.4	4	2	25

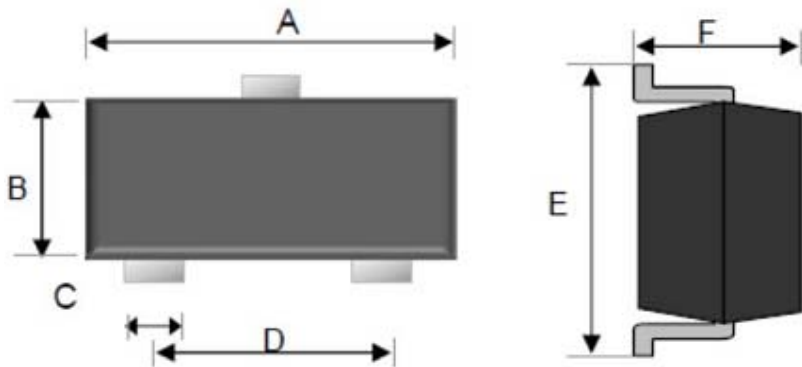
T	W
max	max
0.6	8.3

Unit (mm)

**Marking**

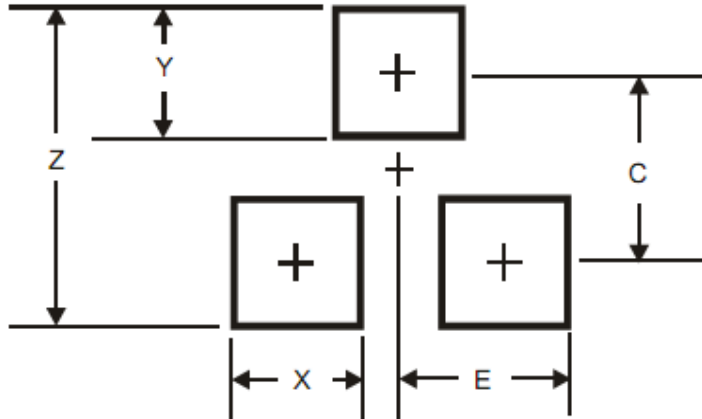
Part No.	Marking
BAT54W	L4
BAT54AW	L42
BAT54CW	L43
BAT54SW	L44

**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**



Symbol	Unit(mm)
Z	2.8
X	0.7
Y	0.9
C	1.9
E	1.0