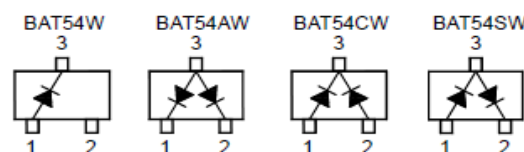


Features

- ◇ 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 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 $I_F = 100 \text{ mA}$	V_F	-	240 320 400 500 1000	mV
Reverse Breakdown Voltage at $I_R = 100 \text{ uA}$	$V_{(BR)R}$	30	-	V
Reverse Current at $V_R = 25 \text{ V}$	I_R	-	2	uA
Total Capacitance at $V_R = 1 \text{ V}$, $f = 1 \text{ MHz}$	C_T	-	10	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}$ through $I_R = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$, $R_L = 100 \text{ }\Omega$	t_{rr}	-	5	ns

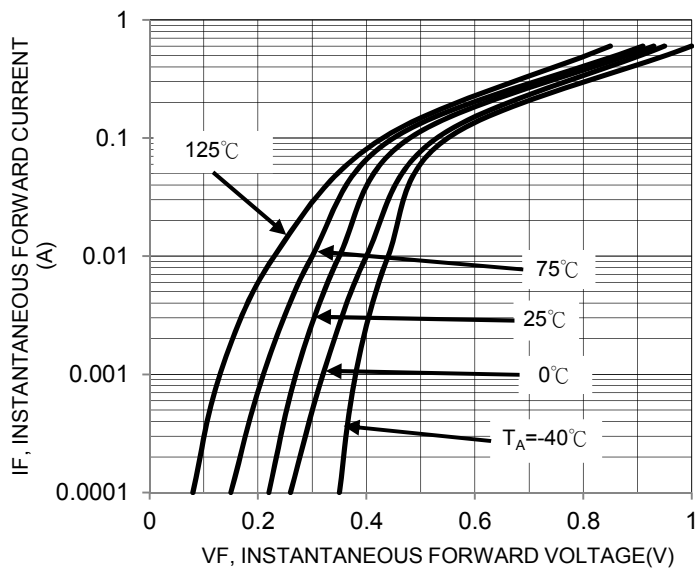


Fig. 3 Typical Capacitance v.s. VR

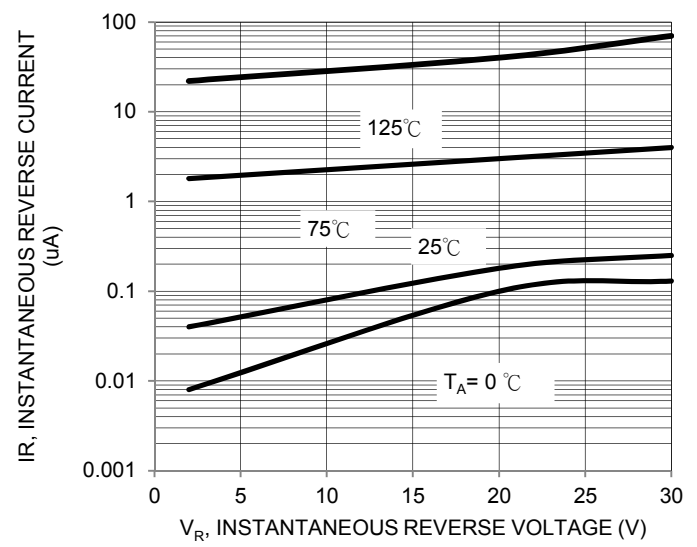
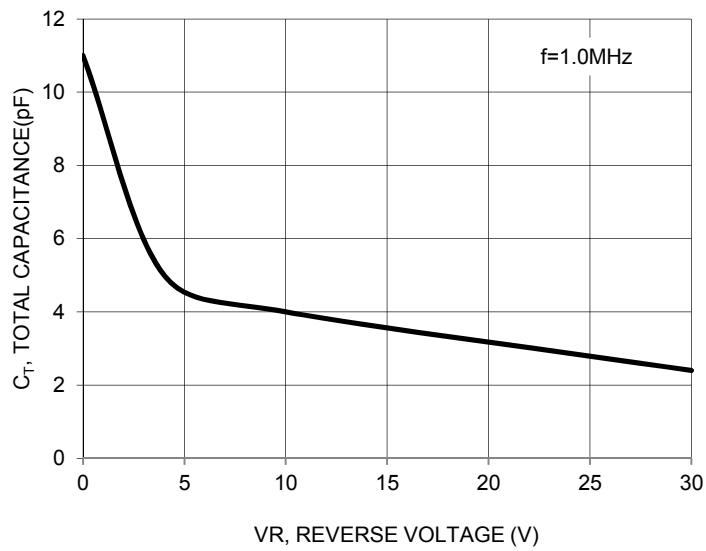
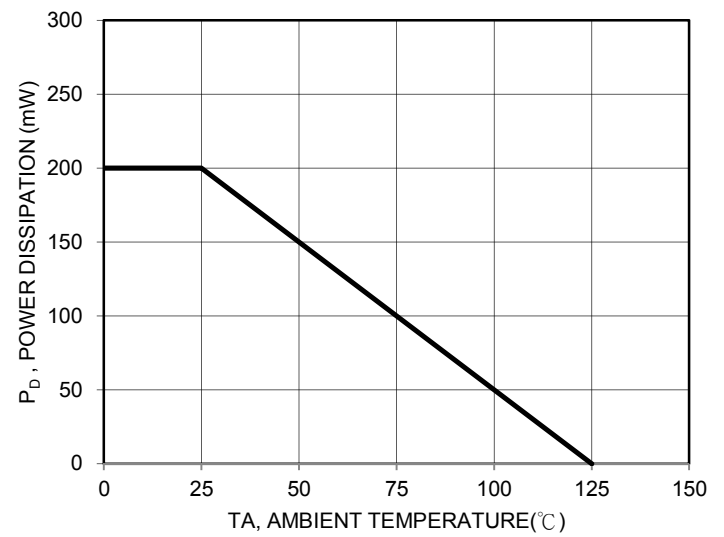


Fig. 4 Power Derating Curve



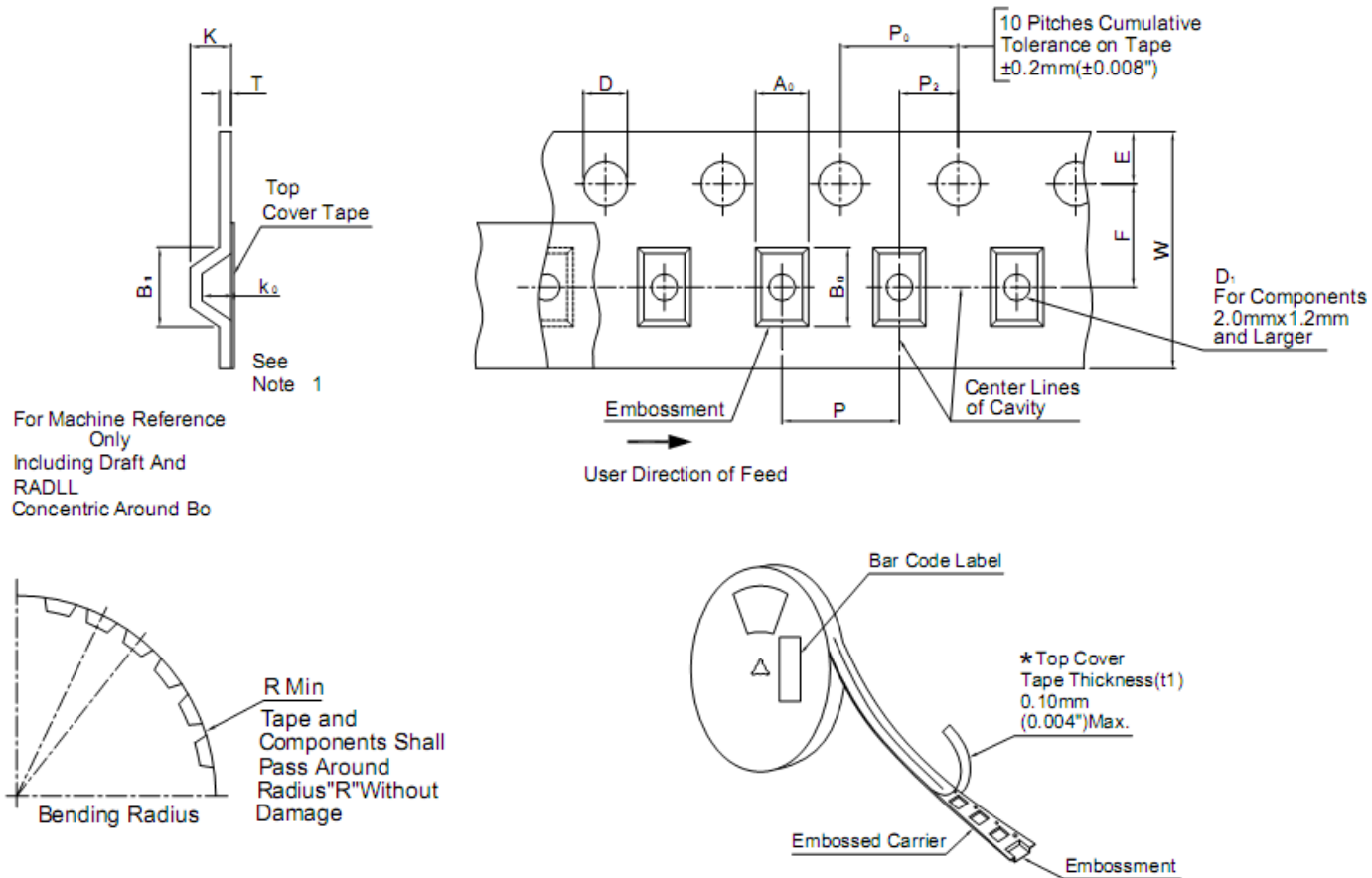
Ordering information (Detail, example)

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

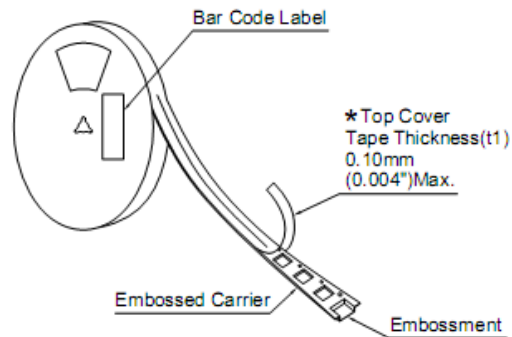
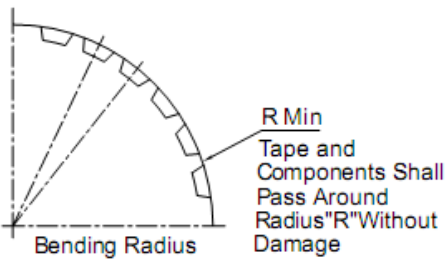
Note 1: "xx" is Device Code from "W" thru "SW".

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

Tape & Reel specification



For Machine Reference Only Including Draft And RADLL Concentric Around Bo



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

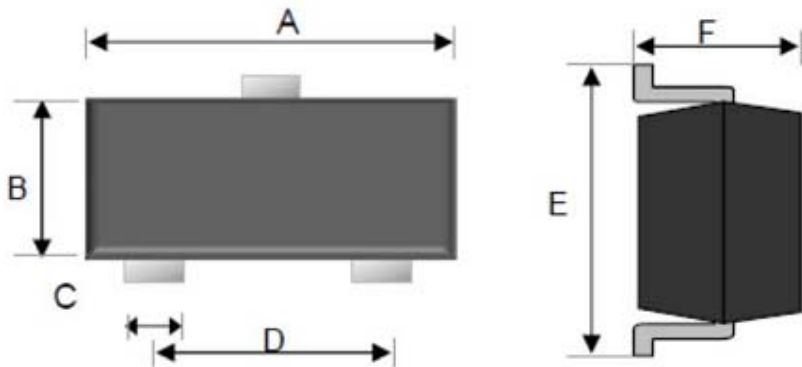
T	W
max	max
0.6	8.3

Unit (mm)

Marking

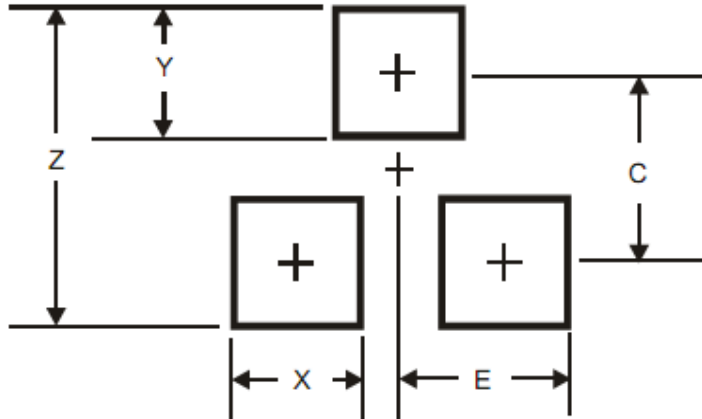
Part No.	Marking
BAT54W	L4
BAT54AW	L42
BAT54CW	L43
BAT54SW	L44

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