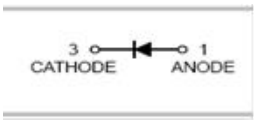
Small Signal Schottky Barrier diode

BAT54W/ BAT54AW/ BAT54CW/ BAT54SW

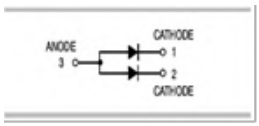
Features

HF

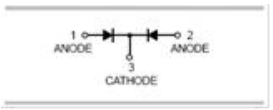
- Low forward voltage drop.
- Fast switching.
- Ultra-small surface mount package.
- PN junction guard ring for transient And ESD protection.



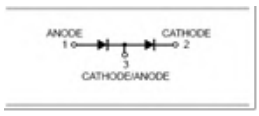
BAT54W



BAT54AW



BAT54CW



BAT54SW

SOT-323

Typical Applications

- For general purpose switching applications.

Mechanical Data

- Case: SOT-323
- Terminals: solderable per MIL-STD-202, Method 208.

Ordering Information

Part Number	Package	Shipping	Marking Code
BAT54W	SOT-323	3000pcs / Tape & Reel	KL5
BAT54AW	SOT-323	3000pcs / Tape & Reel	KL6
BAT54CW	SOT-323	3000pcs / Tape & Reel	KL7
BAT54SW	SOT-323	3000pcs / Tape & Reel	KL8

Maximum Ratings (@T_A=25℃ unless otherwise specified)

Parameter	Symbol	Limits	Unit
Peak Repetitive Peak reverse voltage Working Peak Reverse Voltage DC Reverse Voltage	V_{RRM} V_{RWM} V_R	30	V
Forward Continuous Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Forward surge current@tp<1s	I_{FSM}	600	mA
* part mounted on FR-4 board with recommended pad layout			

Thermal Characteristics

Parameter	Symbol	Limits	Unit
Power Dissipation *	P_D	230	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	435	℃/W
Thermal resistance junction to Case	$R_{\theta JC}$	313	℃/W
Junction temperature	T_J	-55 to +125	℃
Storage temperature range	T_{STG}	-55 to +150	℃

Electrical Characteristics (@T_A=25℃ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	I_R=100μA	30			V
Forward voltage *1	V_F	I_F=0.1mA			0.24	V
		I_F=1mA			0.32	V
		I_F=10mA			0.40	V
		I_F=30mA			0.50	V
		I_F=100mA			1.00	V
Reverse current *2	I_R	V_R=25V			2	μA
Capacitance Between Terminals	C_T	V_R=1V,f=1MHz			10	pF
Reverse Recovery Time	t_{rr}	I_F=I_R=10mA I_{rr}=0.1XI_R,R_L=100Ω			5	ns

*1: pulse test,tp≤300μs
*2: pulse test,tp≤5ms

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

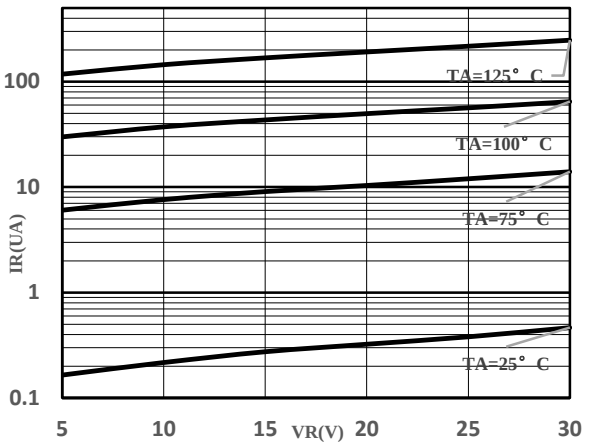


Fig.1- Typical Reverse Characteristic

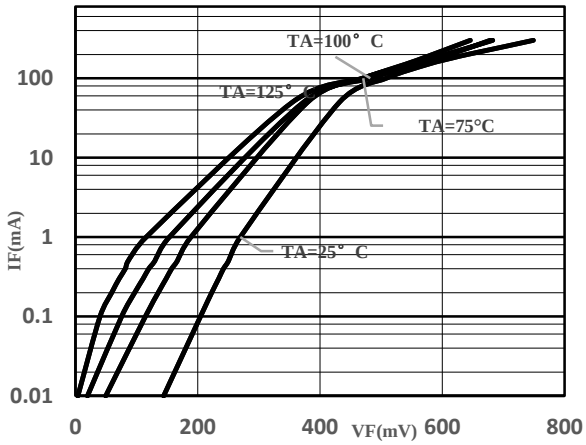


Fig.2- Typical Forward Characteristics

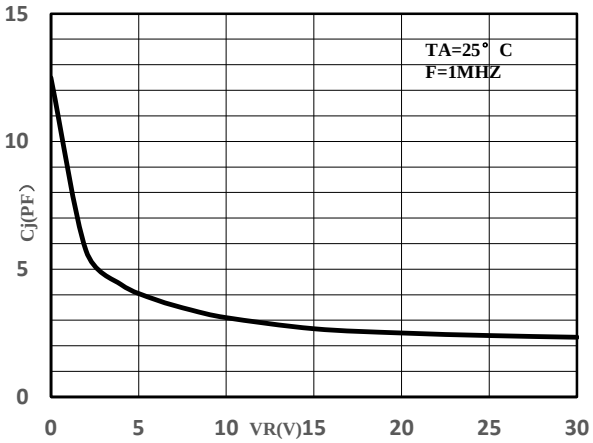


Fig.3-Capacitance Characteristics

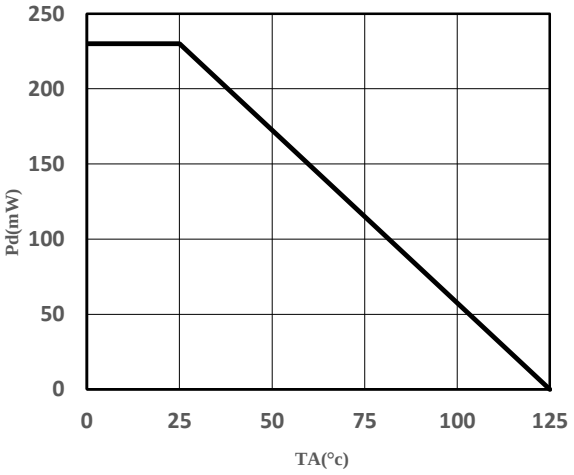
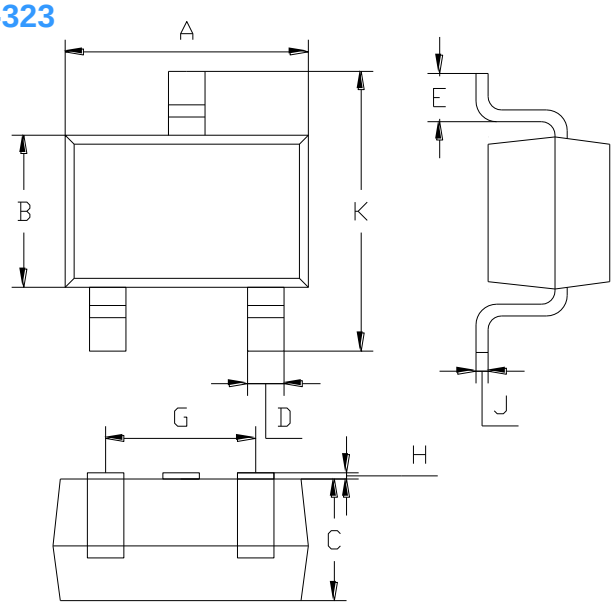


Fig.4-Derating Curve

Package Outline Dimensions(unit:mm)

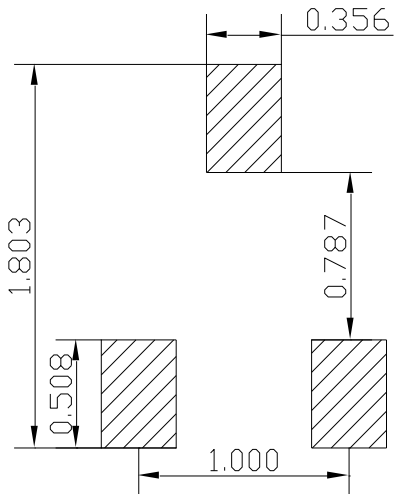
SOT-323



SOT-323		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout(unit:mm)

SOT-323



IMPORTANT NOTICE

Galaxy Microelectronics (GME) reserves the right to make changes without further notice to any product herein to make corrections, modifications , improvements , or other changes. GME does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others .