

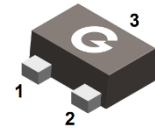
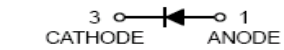
Features

- Fast switching
- Low turn-on voltage
- PN junction guard ring for transient and ESD protection

HF

Mechanical Data

- Case: SOT-723
- Molding compound: UL flammability classification rating 94-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



SOT-723

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAT54M	SOT-723	10000 pcs / Tape & Reel	KL1

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	30	V
Working Peak Reverse Voltage	V _{RWM}		
DC Reverse Voltage	V _R		
Maximum Average Forward Output Current	I _{F(AV)}	200	mA
Repetitive Peak Forward Current	I _{FRM}	300	mA
Forward Surge Current @ t _p < 1s	I _{FSM}	600	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	150	mW
Thermal Resistance (Junction-to-Ambient)	R _{θJA}	667	°C/W
Thermal Resistance (Junction-to-Case)	R _{θJC}	480	°C/W
Operating junction Temperature	T _J	-55 ~ +125	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 100\mu\text{A}$	30	-	-	V
Forward Voltage *1	V_F	$I_F = 0.1\text{mA}$	-	-	0.24	V
		$I_F = 1\text{mA}$	-	-	0.32	V
		$I_F = 10\text{mA}$	-	-	0.40	V
		$I_F = 30\text{mA}$	-	-	0.50	V
		$I_F = 100\text{mA}$	-	-	1	V
Maximum Peak Reverse Current *2	I_R	$V_R = 10\text{V}$	-	-	3	μA
Capacitance Between Terminals	C_T	$V_R = 1\text{V}, f = 1\text{MHz}$	-	-	10	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \cdot I_R, R_L = 100\Omega$	-	-	5	ns
*1: pulse test, $t_p \leq 300\mu\text{s}$						
*2: pulse test, $t_p \leq 5\text{ms}$						

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

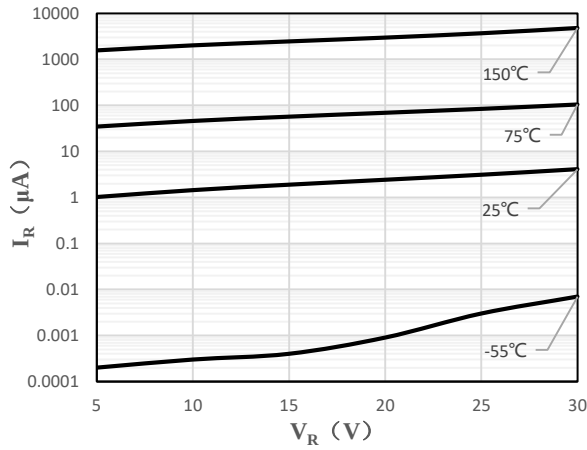


Fig 1 Typical Reverse Characteristic

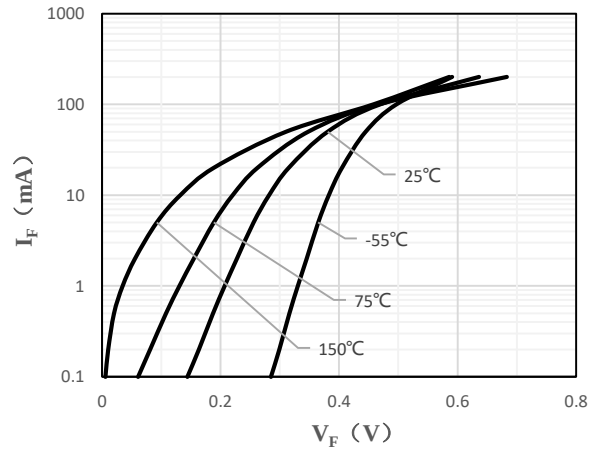


Fig 2 Typical Forward Characteristics

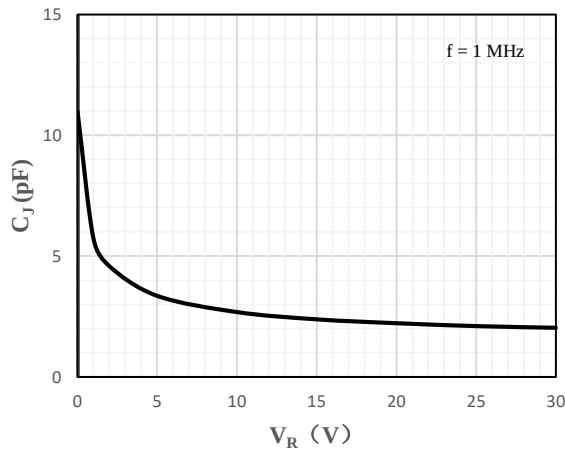


Fig 3 Capacitance Characteristics

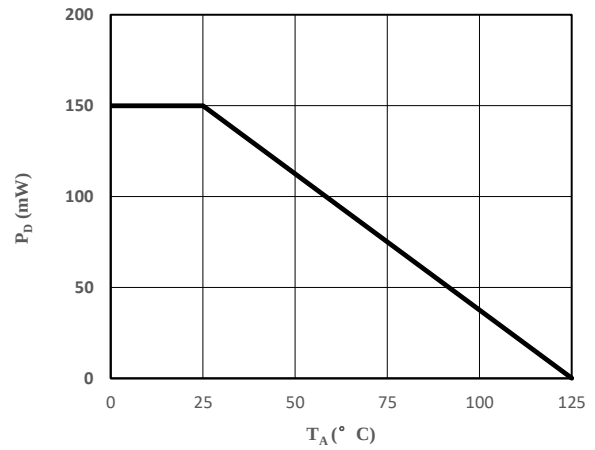
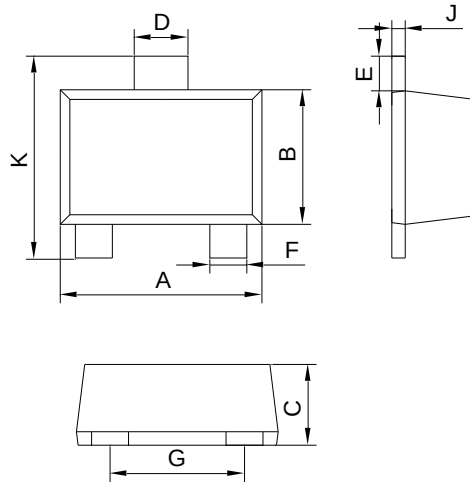


Fig 4 Derating Curve

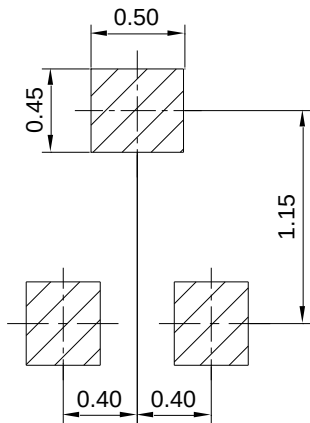
Package Outline Dimensions (Unit: mm)



SOT-723		
Dimension	Min.	Max.
A	1.10	1.30
B	0.70	0.90
C	0.40	0.54
D	0.22	0.42
E	0.10	0.30
F	0.12	0.32
G	0.70	0.90
J	0.08	0.15
K	1.10	1.30

Mounting Pad Layout (Unit: mm)

SOT-723



IMPORTANT NOTICE

Changzhou Galaxy Century Microelectronics (GME) reserves the right to make changes without further notice to any product information (copyrighted) 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.