

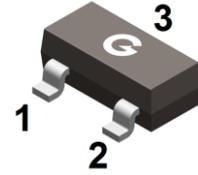
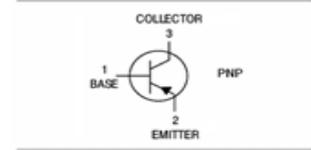
Features

- Epitaxial planar die construction
- Complementary NPN type available(MMBT5551)

HF

Mechanical Data

- Case: SOT-23
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MMBT5401	SOT-23	3000 pcs / Tape & Reel	2L

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	-160	V
Collector-Emitter Breakdown Voltage	V _{CEO}	-150	V
Emitter-Base Breakdown Voltage	V _{EBO}	-5	V
Collector Current (Continuous)	I _C	-0.6	A
Collector Current (Peak)	I _{CM}	-0.8	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	0.35	W
Thermal Resistance Junction-to-Air ^{**1}	R _{θJA}	315	°C/W
Thermal Resistance Junction-to-Case ^{**1}	R _{θJC}	185	°C/W
Thermal Resistance Junction-to-Lead ^{**1}	R _{θJL}	126	°C/W
Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a 15mm * 15mm * 1mm FR4-epoxy P.C.B

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}, I_E = 0$	-160	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-150	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -120\text{V}, I_E = 0$	-	-	-50	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -3\text{V}, I_C = 0$	-	-	-50	nA
DC Current Gain	h_{FE}	$V_{CE} = -5\text{V}, I_C = -1\text{mA}$	50	-	-	-
		$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	100	-	300	-
		$V_{CE} = -5\text{V}, I_C = -50\text{mA}$	50	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$	-	-	-0.2	V
		$I_C = -50\text{mA}, I_B = -5\text{mA}$	-	-	-0.5	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$	-	-	-1	V
		$I_C = -50\text{mA}, I_B = -5\text{mA}$	-	-	-1	V
Collector-base Output Capacitance	C_{cbo}	$V_{CB} = -10\text{V}, f = 1\text{MHz}, I_E = 0$	-	-	6	pF
Current-Gain— Bandwidth Product	f_T	$I_C = -10\text{mA}, V_{CE} = -10\text{V}$ $f = 100\text{MHz}$	100	-	300	MHz

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

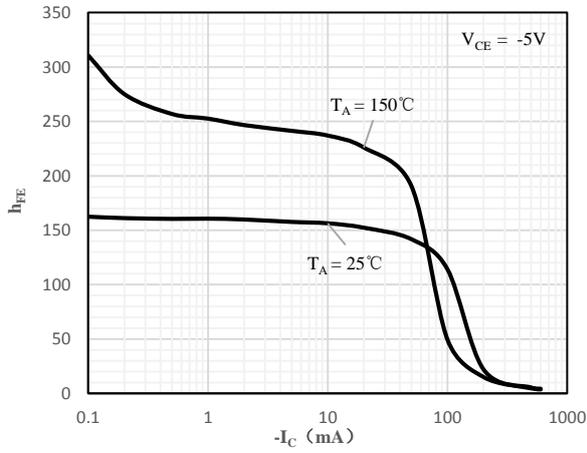


Fig 1 h_{FE} vs. I_C

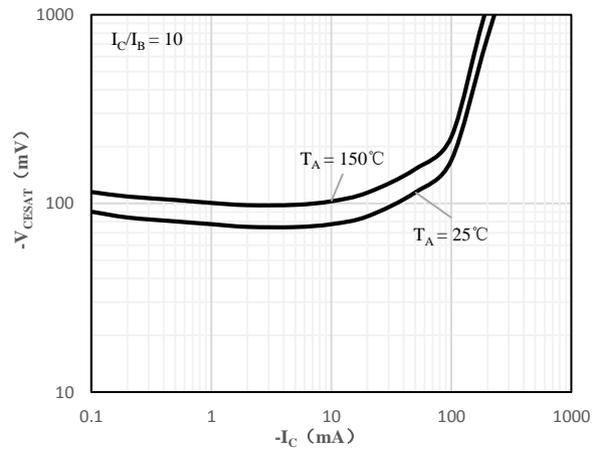


Fig 2 $V_{CE(sat)}$ vs. I_C

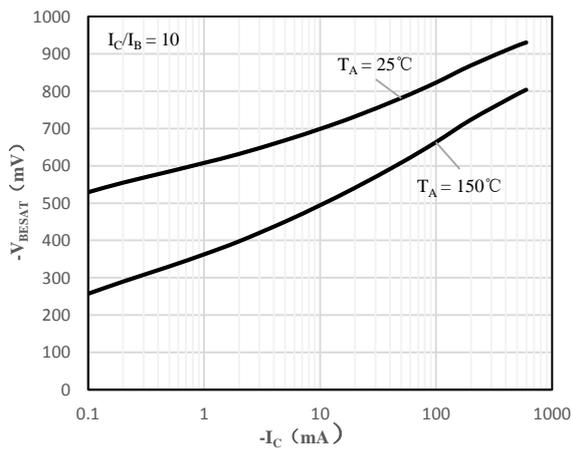


Fig 3 $V_{BE(sat)}$ vs. I_C

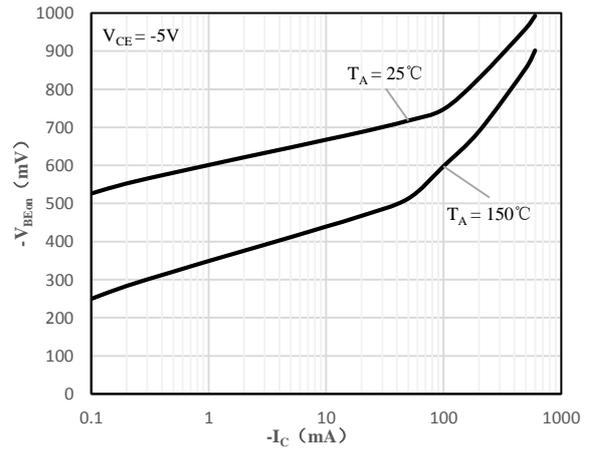
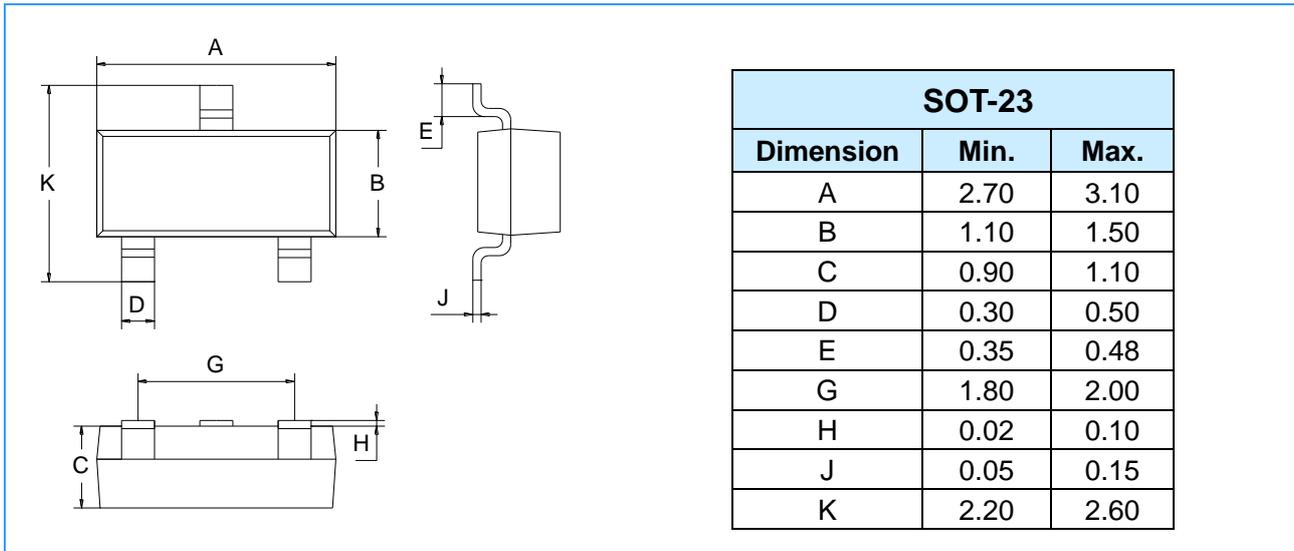
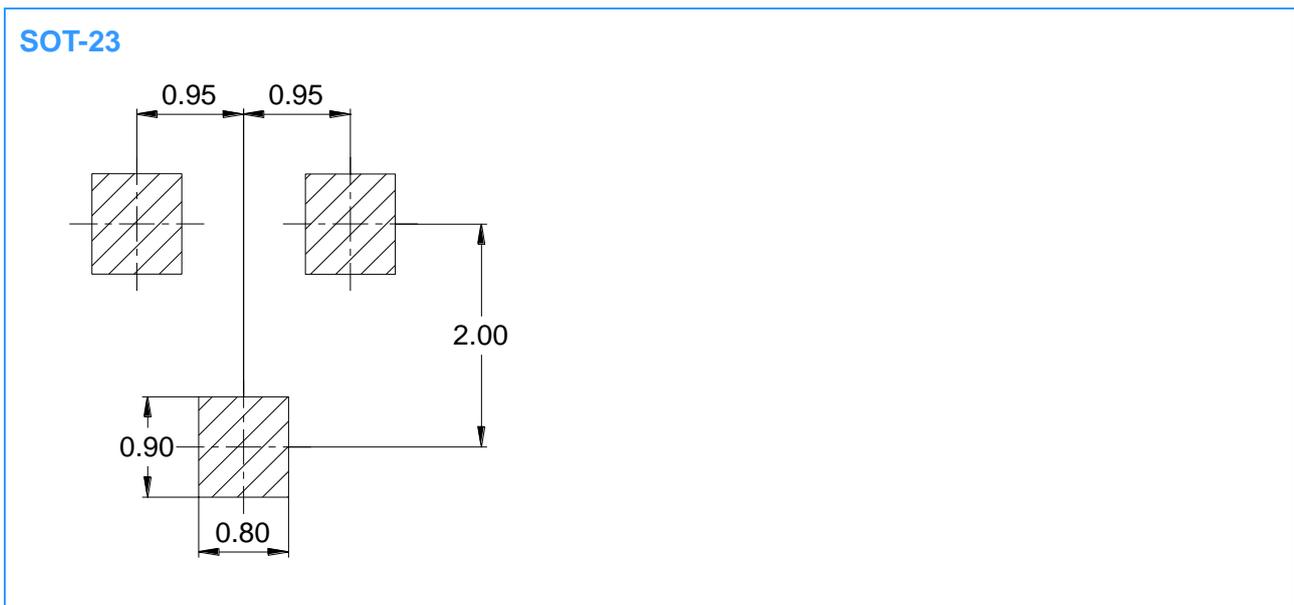


Fig 4 $V_{BE(on)}$ vs. I_C

Package Outline Dimensions (Unit: mm)



Package Outline Dimensions (Unit: mm)



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.