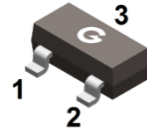
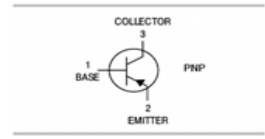


Features

- Excellent h_{FE} Linearity
- Complementary to T2SC2412
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF



SOT-23

Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
T2SA1037	SOT-23	3000 pcs / Tape & Reel	FQ/FR/FS

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

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	-60	V
Collector-Emitter Breakdown Voltage	V_{CEO}	-50	V
Emitter-Base Breakdown Voltage	V_{EBO}	-6	V
Continuous Collector Current	I_C	-150	mA
Peak Collector Current	I_{CM}	-200	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation($T_A = 25^\circ\text{C}$)	P_D	200	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	420	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	250	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	180	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note 1: The data tested by surface mounted on a minimum recommended FR-4 board

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -50\mu\text{A}, I_E = 0$	-60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-50	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -50\mu\text{A}, I_C = 0$	-6	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -60\text{V}, I_E = 0$	-	-	-0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -6\text{V}, I_C = 0$	-	-	-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	120	-	560	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$	-	-	-0.5	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$	-	-	-1.2	V
Transition Frequency	f_T	$I_C = -2\text{mA}, V_{CE} = -12\text{V}$ $f = 30\text{MHz}$	-	140	-	MHz
Output Capacitance	C_{ob}	$V_{CB} = -12\text{V}, I_E = 0\text{A}, f = 1\text{MHz}$	-	4	5	pF

Classification of h_{FE}

Rank	Q	R	S
Range	120-270	180-390	270-560
Marking	FQ	FR	FS

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

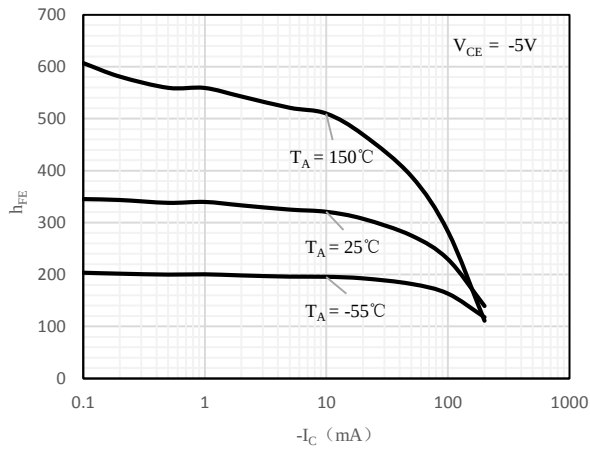


Fig 1 h_{FE} vs. I_C

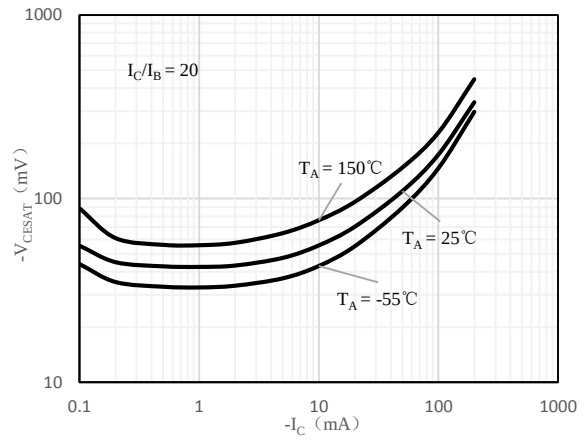


Fig 2 $V_{CE(sat)}$ vs. I_C

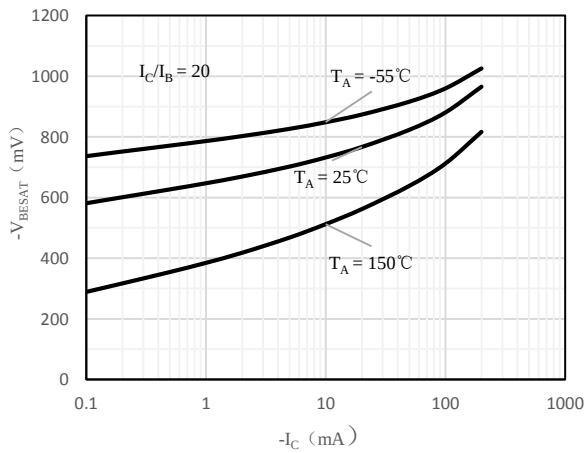


Fig 3 $V_{BE(sat)}$ vs. I_C

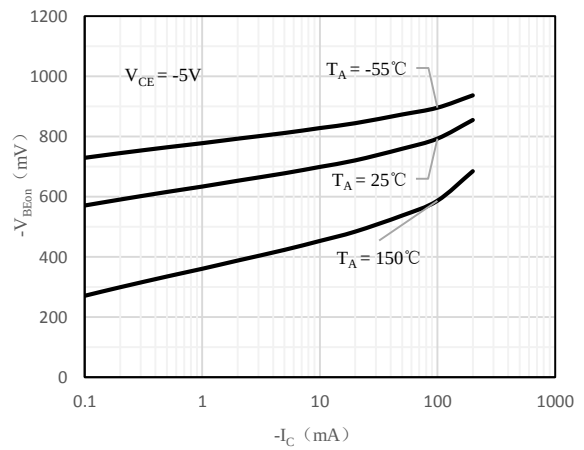
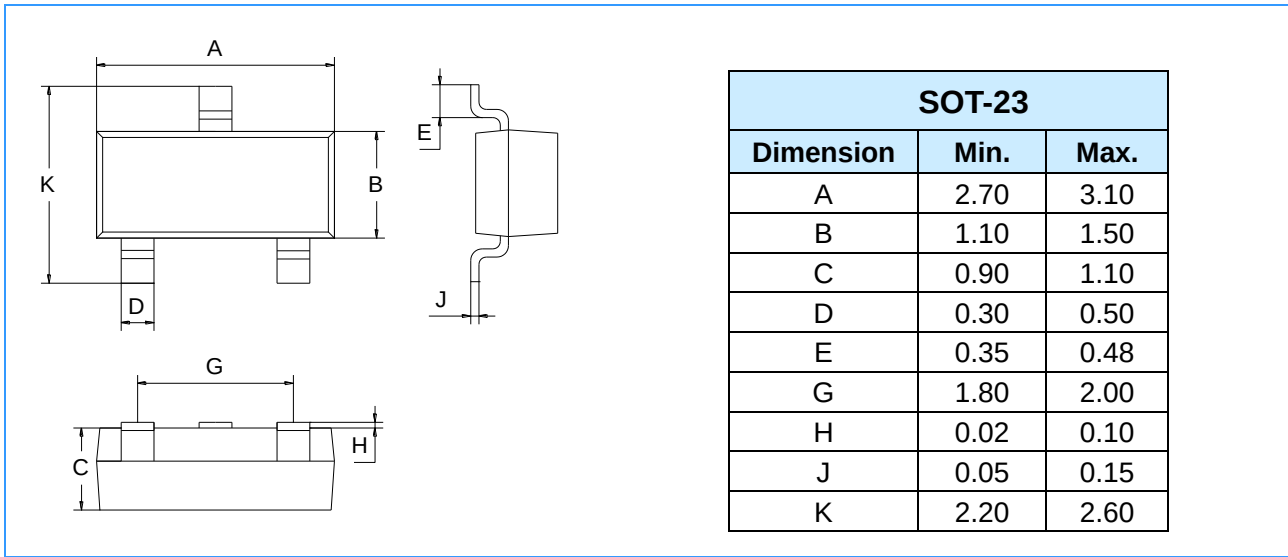
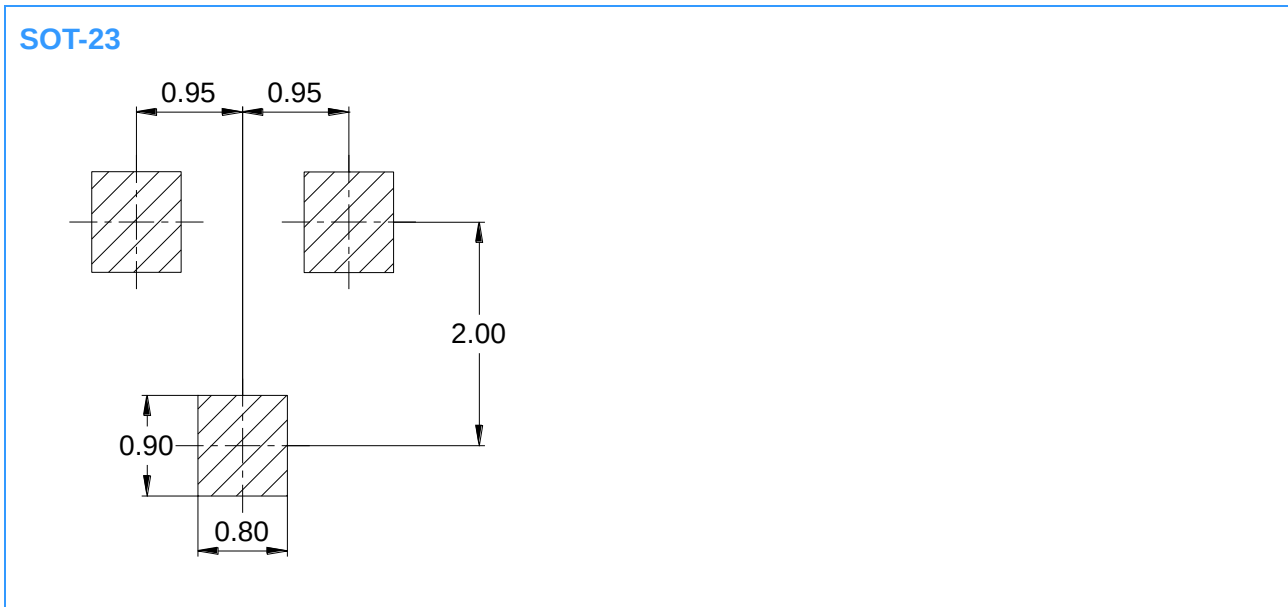


Fig 4 $V_{BE(on)}$ vs. I_C

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.