

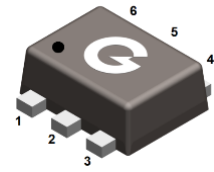
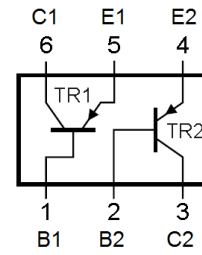
Features

- Epitaxial die construction
- Ultra-small surface mount package

HF

Mechanical Data

- Case: SOT-563
- Molding compound: UL flammability classification rating 94V-0
- Terminal s: Tin-plated; solderability per MIL-STD-202, Method 208



SOT-563

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BL5201V	SOT-563	3000 pcs / Tape Reel	EC

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-50	V
Collector-Emitter Voltage	V _{CEO}	-45	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current (Continuous)	I _C	-100	mA
Collector Current (Peak)	I _{CM}	-200	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *1	P _C	300	mW
Thermal Resistance Junction-to-Air *2	R _{θJA}	268	°C/W
Thermal Resistance Junction-to-Case *2	R _{θJC}	167	°C/W
Thermal Resistance Junction-to-Lead *2	R _{θJL}	202	°C/W
Operating junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Notes:

1. Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint, Reflow soldering is the only recommended soldering method
2. The data tested by surface mounted on a 22mm * 17mm * 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	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_B = 0$	-50	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-45	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -1\mu\text{A}, I_C = 0$	-5	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$	-	-	-15	nA
Emitter-base Cut-off Current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$	-	-	-100	nA
Collector-emitter Cut-off Current	I_{CEO}	$V_{CE} = -30\text{V}, I_B = 0$	-	-	-1	mA
DC Current Gain	h_{FE}	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	200	-	450	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$	-	-	-0.20	V
		$I_C = -100\text{mA}, I_B = -5\text{mA}$	-	-	-0.40	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$	-	-	-0.90	V
		$I_C = -100\text{mA}, I_B = -5\text{mA}$	-	-	-1.10	V
Base-Emitter Voltage	$V_{BE(ON)}$	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	-0.58	-	-0.70	V
		$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	-	-	-0.77	V
Transition Frequency	f_T	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $f = 100\text{MHz}$	100	-	-	-

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

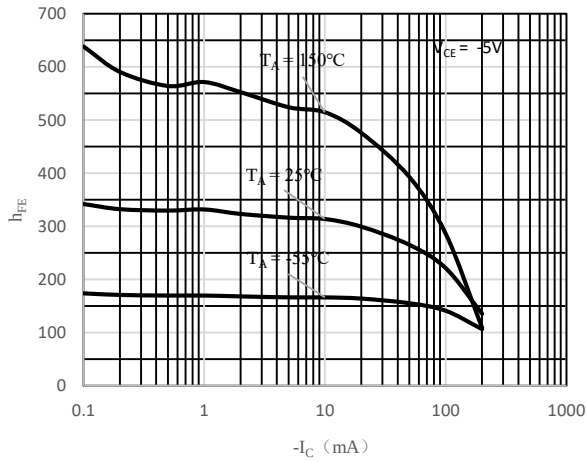


Fig 1 h_{FE} vs. I_C

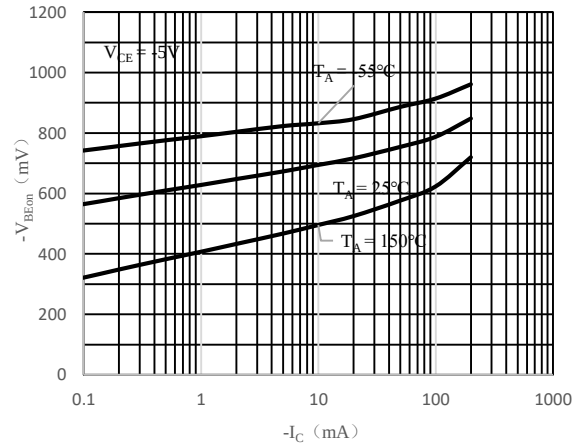


Fig 2 $V_{BE(on)}$ vs. I_C

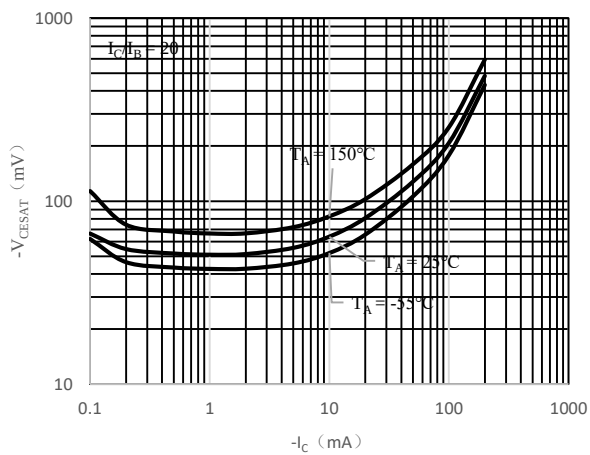


Fig 3 $V_{CE(sat)}$ vs. I_C

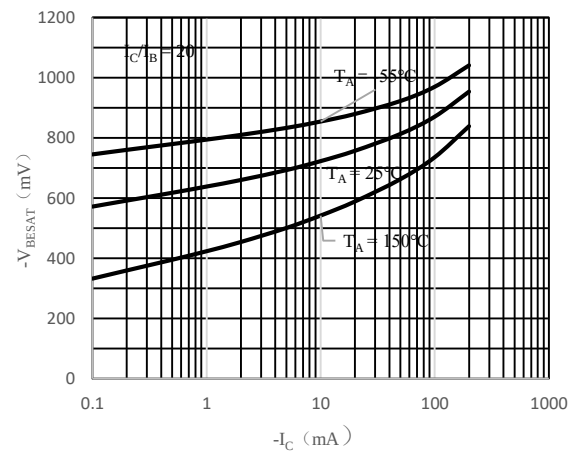
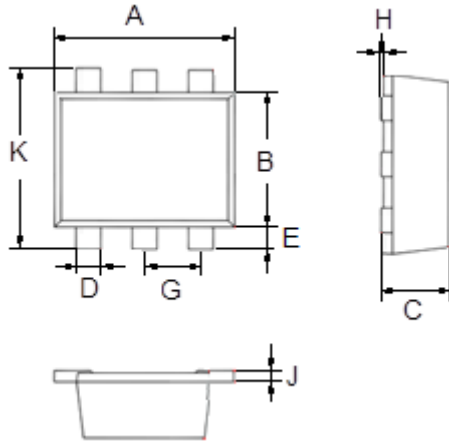


Fig 4 $V_{BE(sat)}$ vs. I_C

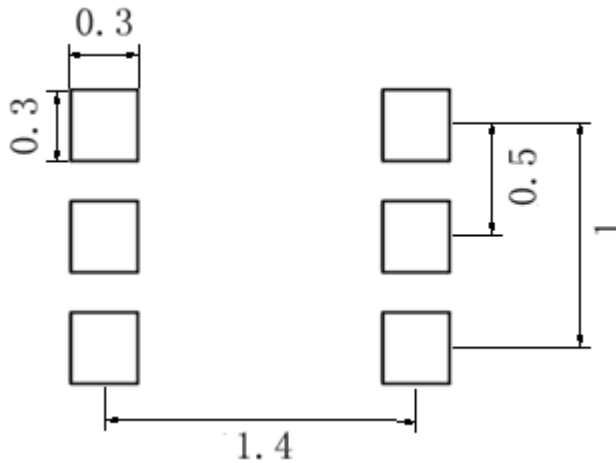
Package Outline Dimensions (Unit: mm)



SOT-563		
Dimension	Min.	Max.
A	1.500	1.700
B	1.100	1.300
C	0.525	0.600
D	0.170	0.270
E	0.100	0.300
G	0.450	0.550
H	0.000	0.050
J	0.090	0.160
K	1.500	1.700

Package Outline Dimensions (Unit: mm)

SOT-563



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.