银河微电 Galaxy Microelectronics

PNP Small Signal Surface Mount Transistor

BC856AL BC856BL

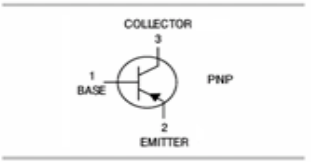
Features

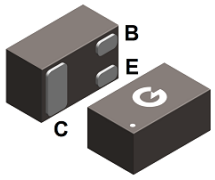
HF

- Low current
- Low voltage
- RoHS compliant with Halogen-free

Mechanical Data

- Case: DFN1006-3
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208





DFN1006-3

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BC856AL	DFN1006-3	10000 pcs / Tape & Reel	3A
BC856BL	DFN1006-3	10000 pcs / Tape & Reel	3B

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-80	V
Collector-Emitter Voltage	V_{CEO}	-65	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 (T_A = 25°C) *1	P_D	250	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	500	°C/W
Operating Junction Temperature	T_J	-65 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Note 1: The data tested by surface mounted on an FR4 PCB with 60 μm copper strip line, standard footprint

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = -10μA, I_E = 0	-80	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = -10mA, I_B = 0	-65	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = -1μA, I_C = 0	-5	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = -30V, I_E = 0	-	-	-15	nA
Emitter-base Cut-off Current	I_{EBO}	V_{EB} = -5V, I_C = 0	-	-	-100	nA
DC Current Gain BC856AL	h_{FE}	V_{CE} = -5V, I_C = -2mA	125	-	250	-
DC Current Gain BC856BL			220	-	475	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = -10mA, I_B = -0.5mA	-	-	-0.3	V
		I_C = -100mA, I_B = -5mA	-	-	-0.65	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = -10mA, I_B = -0.5mA	-	-0.70	-	V
		I_C = -100mA, I_B = -5mA	-	-0.85	-	V
Base-Emitter Voltage	$V_{BE(ON)}$	V_{CE} = -5V, I_C= -2mA	-0.6	0.65	-0.75	V
		V_{CE} = -5V, I_C= -10mA	-	-	-0.82	V
Transition Frequency	f_T	V_{CE} = -5V, I_C= -10mA f = 100MHz	100	-	-	MHz
Collector Capacitance	C_C	V_{CB} = -10V, I_E = I_e = 0 f = 1MHz	-	4.5	-	pF

Ratings and Characteristic Curves-BC856AL (@ T_A = 25℃ unless otherwise specified)

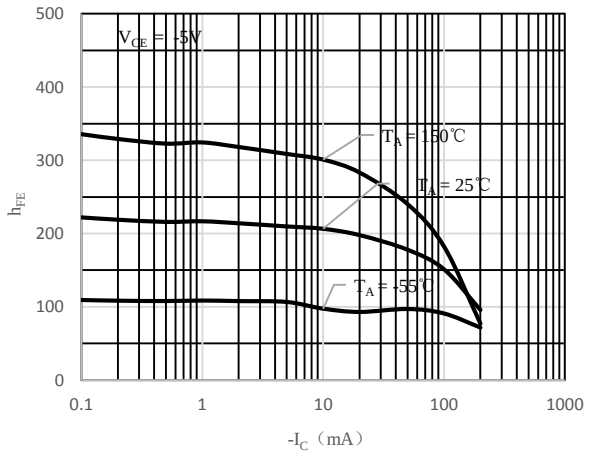


Fig 1 h_{FE} vs. I_C

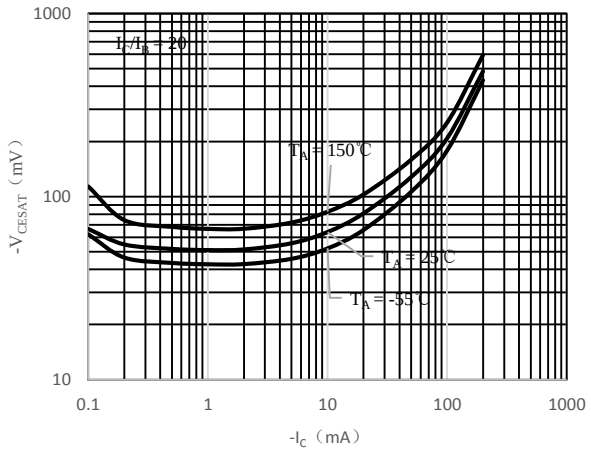


Fig 2 $V_{CE(sat)}$ vs. I_C

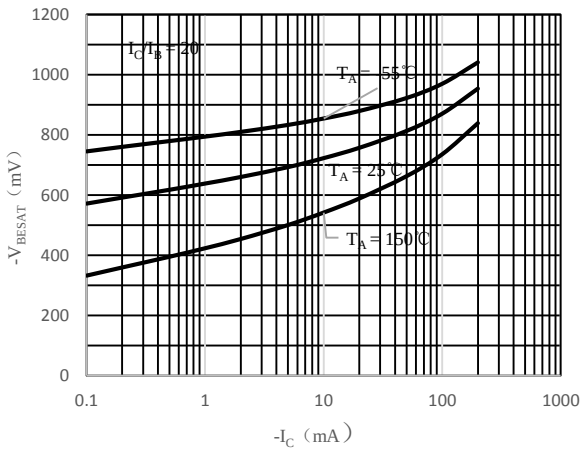


Fig 3 $V_{BE(sat)}$ vs. I_C

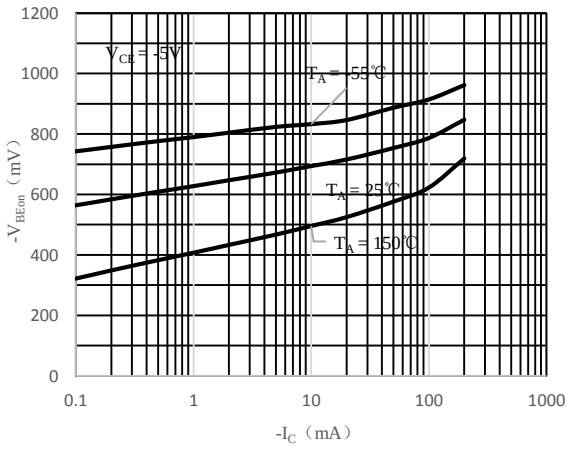
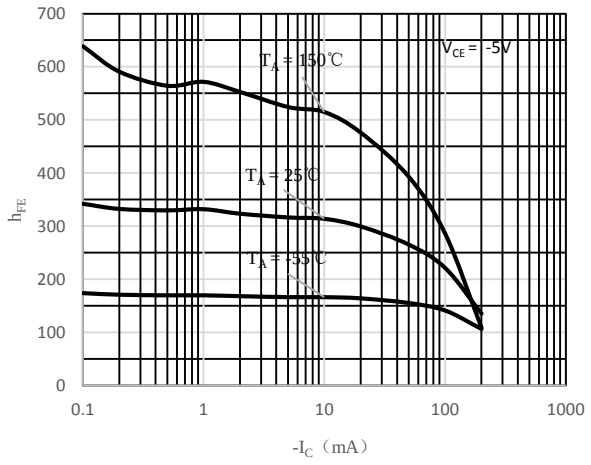


Fig 4 $V_{BE(ON)}$ vs. I_C

Ratings and Characteristic Curves-BC856BL (@ T_A = 25℃ unless otherwise specified)



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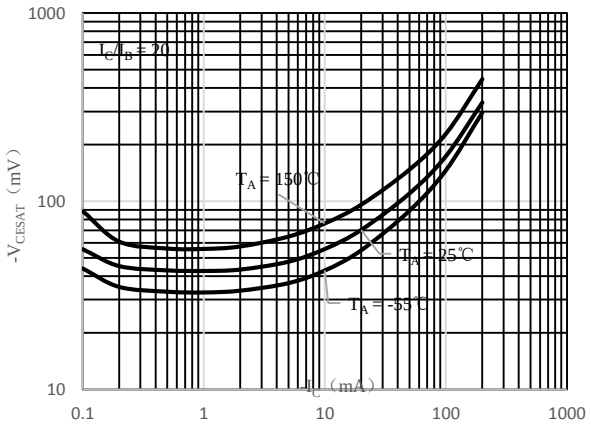

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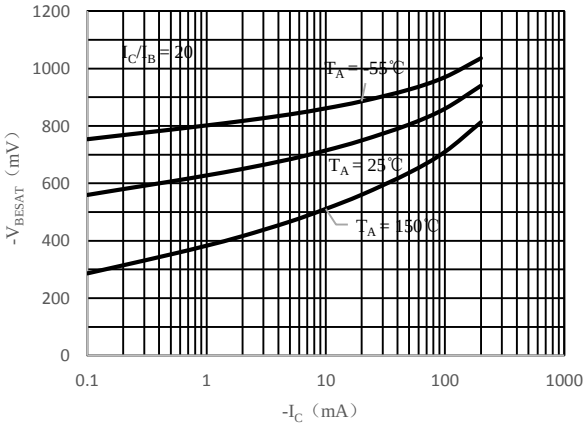


Fig 3 $V_{BE(sat)}$ vs. I_C

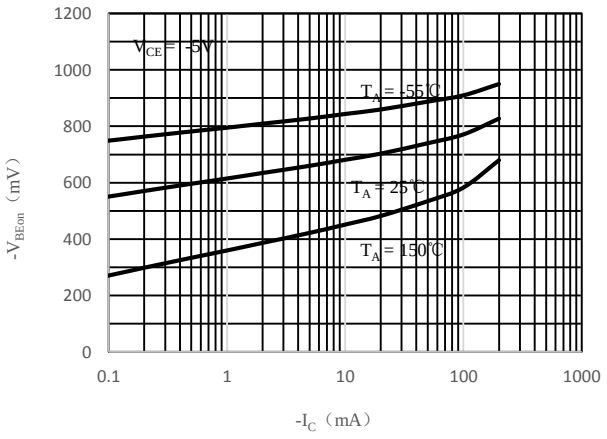
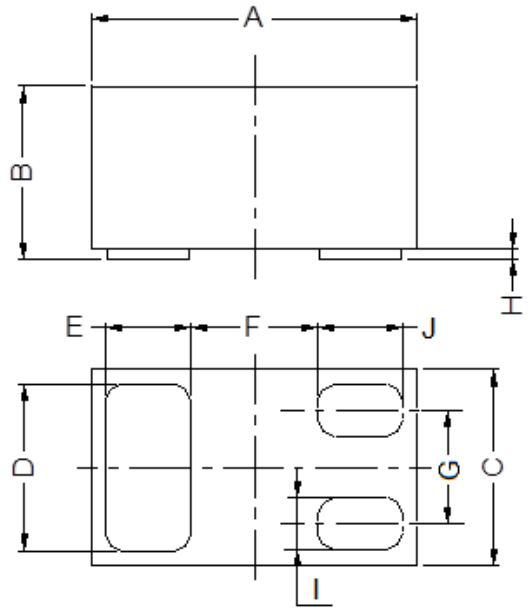


Fig 4 $V_{BE(ON)}$ vs. I_C

Package Outline Dimensions (Unit: mm)



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Dimension	**Min.**	**Typ.**	**Max.**
A	0.95	1.00	1.075
B	0.47	0.50	0.53
C	0.55	0.60	0.675
D	0.45	0.50	0.55
E/J	0.20	0.25	0.30
F	-	0.40	-
G	-	0.35	-
H	0	0.03	0.05
I	0.10	0.15	0.20

Package Outline Dimensions (Unit: mm)

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