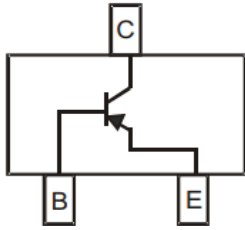


PNP General Purpose Transistors



SOT-323

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Part no. with suffix "HQ" means AEC-Q101 qualified

Applications

- PNP General purpose switching and amplification

Mechanical Data

- Case: SOT-323
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Value	
Collector-Base Voltage	V_{CBO}	V	BC856AWHQ BC856BWHQ	-80
			BC857AWHQ BC857BWHQ BC857CWHQ	-50
			BC858AWHQ BC858BWHQ BC858CWHQ	-30
Collector-Emitter Voltage	V_{CEO}	V	BC856AWHQ BC856BWHQ	-65
			BC857AWHQ BC857BWHQ BC857CWHQ	-45
			BC858AWHQ BC858BWHQ BC858CWHQ	-30
Emitter-Base Voltage	V_{EBO}	V	-5	
Collector Current -Continuous	I_C	mA	-100	
Total Device Dissipation	P_D	mW	200	
Thermal Resistance Junction to Ambient (*)	R_{thJA}	K/W	625	
Junction Temperature	T_j	°C	-55 to +150	
Storage Temperature	T_{STG}	°C	-55 to +150	

(*) Device mounted on FR-4 PCB 1.0 x 1.0 x 0.06 inch.



BC856AWHQ THRU BC858CWHQ

RoHS
COMPLIANT

■ Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V _{CBO}	V	BC856AWHQ BC856BWHQ	I _C = -10uA, I _E =0	-80	
			BC857AWHQ BC857BWHQ BC857CWHQ		-50	
			BC858AWHQ BC858BWHQ BC858CWHQ		-30	
Collector-emitter breakdown voltage	V _{CEO}	V	BC856AWHQ BC856BWHQ	I _C = -10mA, I _B =0	-65	
			BC857AWHQ BC857BWHQ BC857CWHQ		-45	
			BC858AWHQ BC858BWHQ BC858CWHQ		-30	
Emitter-base breakdown voltage	V _{EBO}	V	I _E = -1uA, I _C =0	-5		
Collector-base cut-off current	I _{CBO}	uA	V _{CB} = -30V, I _E =0			-0.1
Emitter-base cut-off current	I _{EBO}	uA	V _{EB} = -5V, I _C =0			-0.1
DC current gain	h _{FE}		BC856AWHQ BC857AWHQ BC858AWHQ	V _{CE} = -5V, I _C = -2mA	125	250
			BC856BWHQ BC857BWHQ BC858BWHQ		220	475
			BC857CWHQ BC858CWHQ		420	800
Collector-emitter saturation voltage	V _{CE(sat)}	V	I _C =-100mA, I _B = -5mA			-0.65
Base-emitter saturation voltage	V _{BE(sat)}	V	I _C =-100mA, I _B = -5mA			-1.1
Transition frequency	f _T	MHz	V _{CE} =-5V, I _C =-10mA, f=100MHz	100		

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC856AWHQ THRU BC858CWHQ	F2	Approximate 0.005	3000	30000	120000	7" reel



■BC856AHQ Characteristics (Typical)

Fig. 1-Static Characteristic

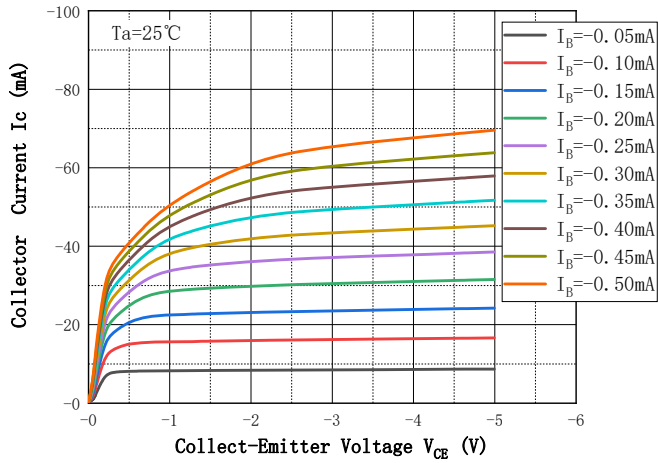


Fig. 2 - DC Current Gian

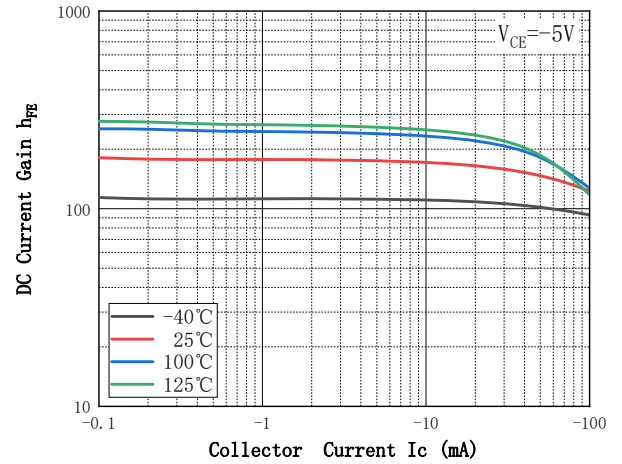


Fig. 3 - Collect-Emmitter Saturation Voltage

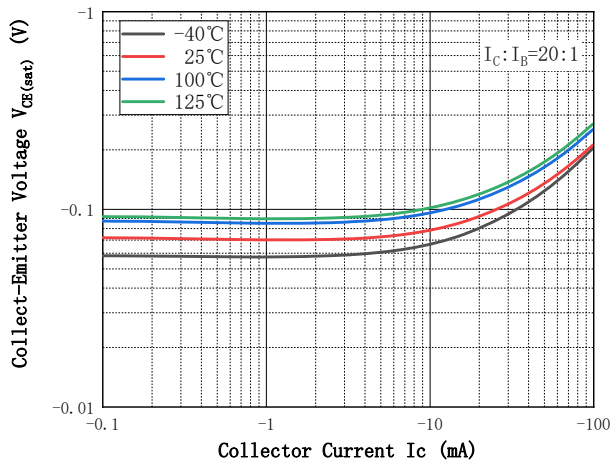


Fig. 4 - Base-Emmitter Voltage

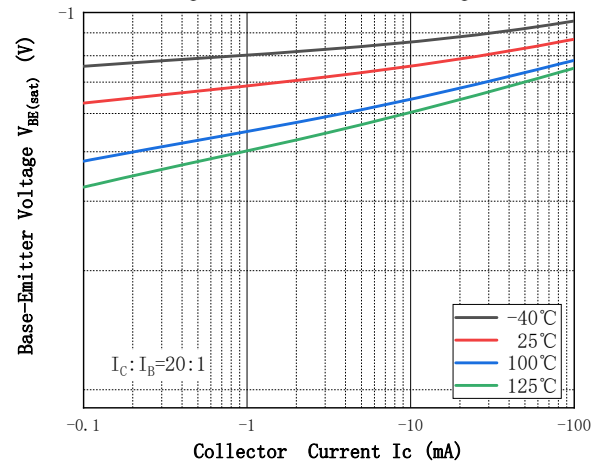


Fig. 5 - Base-Emmitter On Voltage

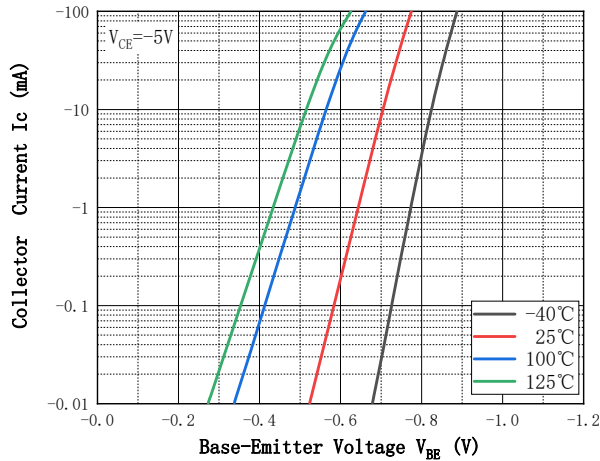
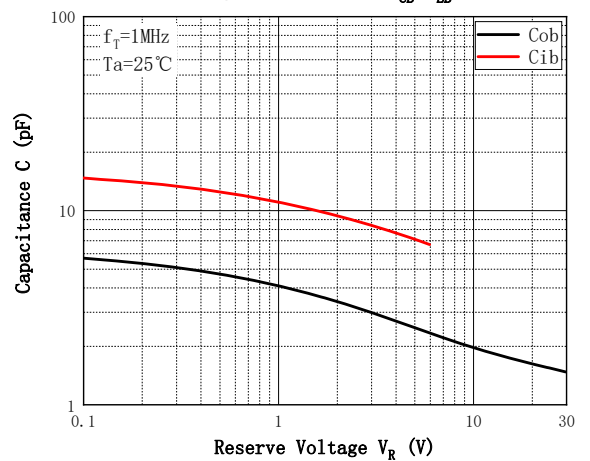
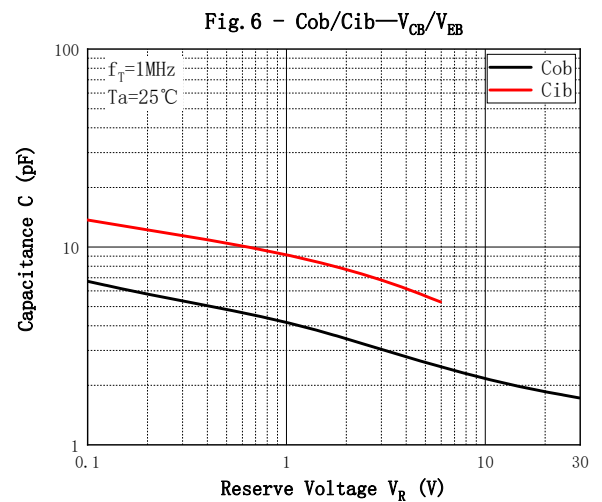
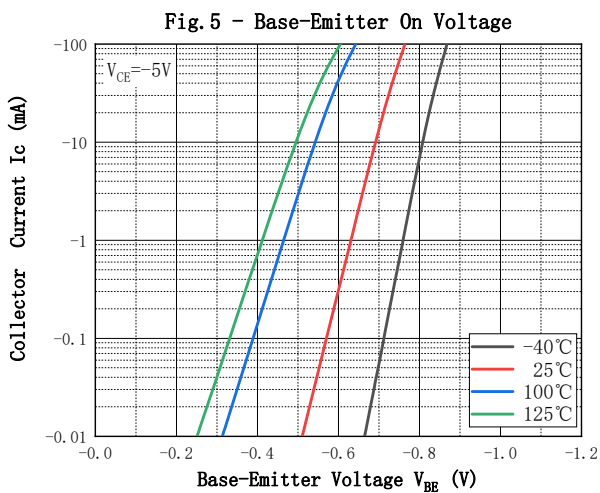
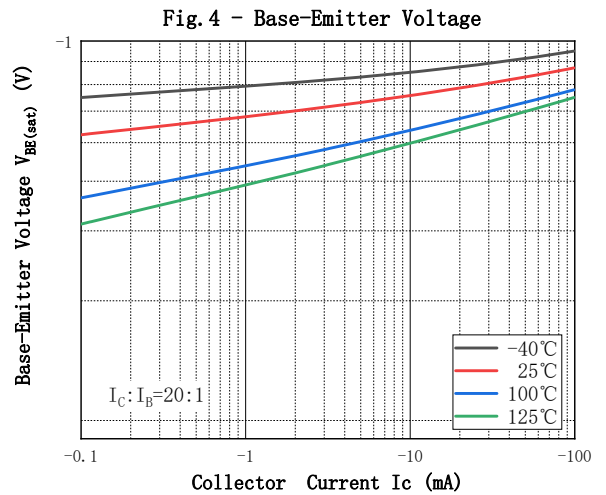
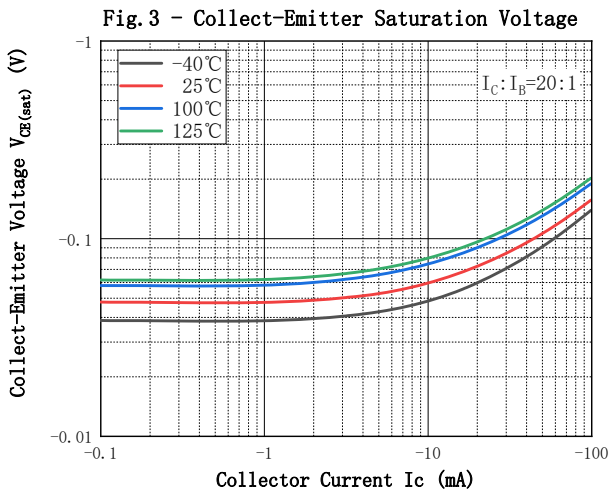
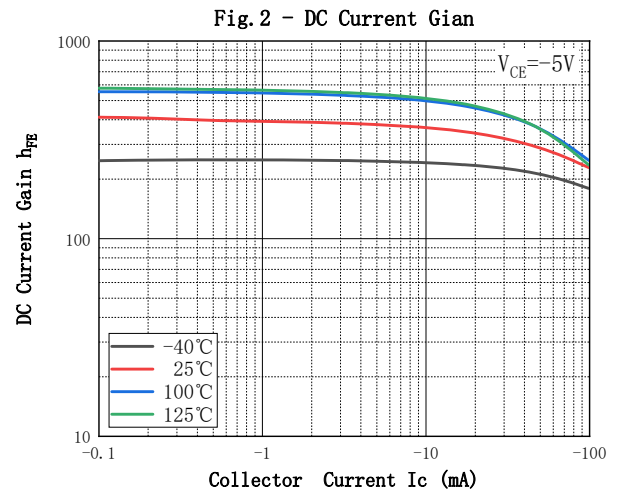
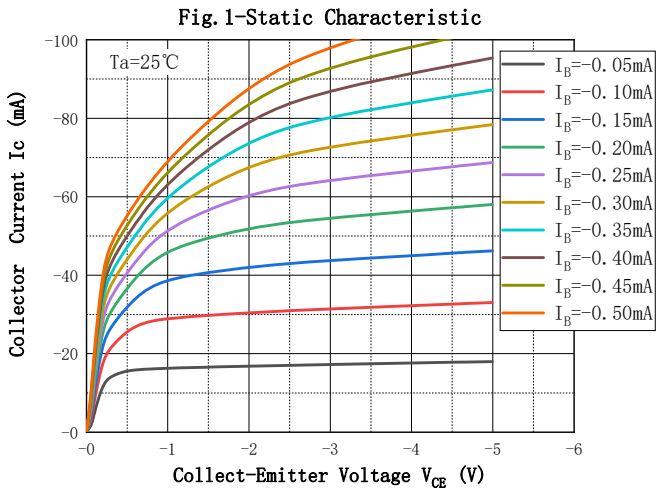


Fig. 6 - Cob/Cib—VCE/VBE





■BC856BHQ Characteristics (Typical)





■BC857AHQ/BC858AHQ Characteristics (Typical)

Fig.1-Static Characteristic

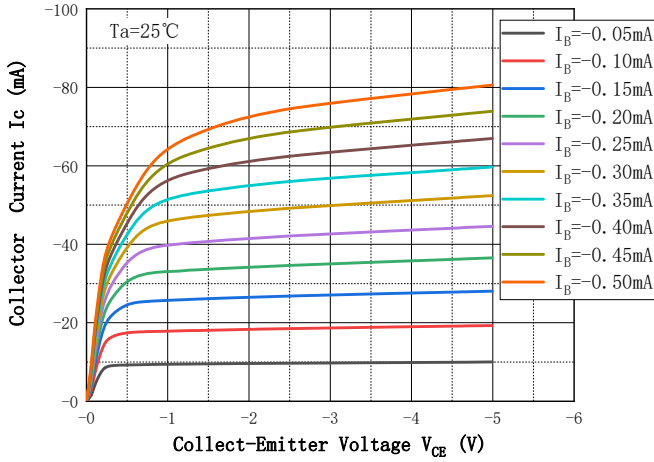


Fig.2 - DC Current Gian

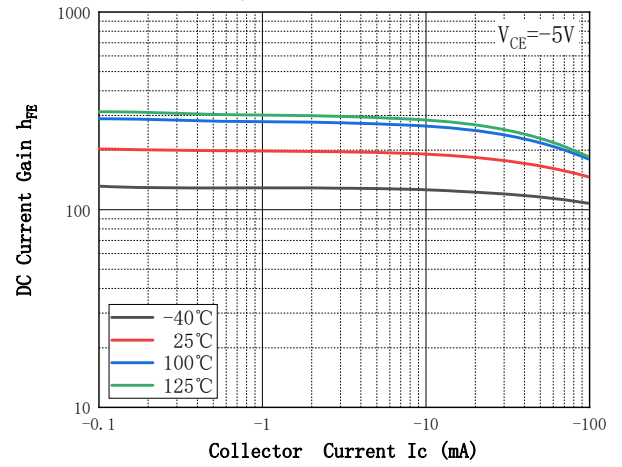


Fig.3 - Collect-Emittor Saturation Voltage

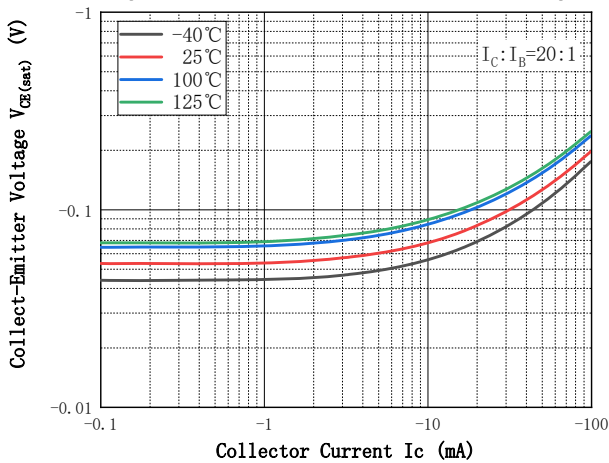


Fig.4 - Base-Emittor Voltage

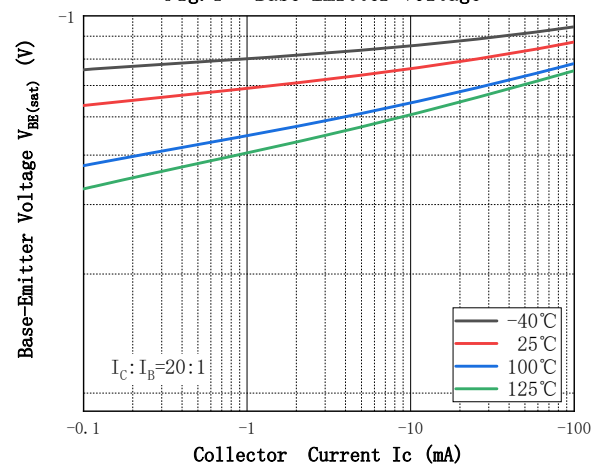


Fig.5 - Base-Emittor On Voltage

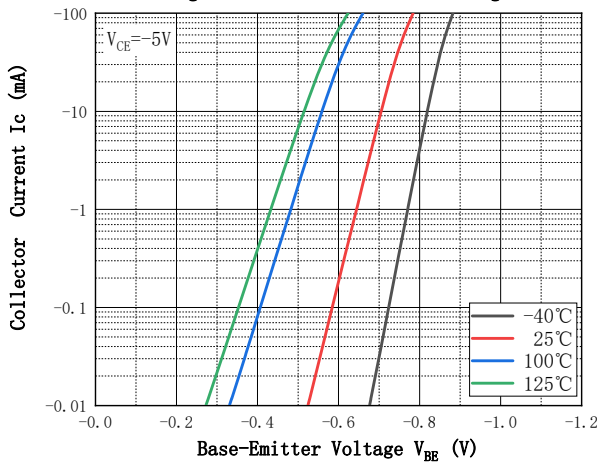
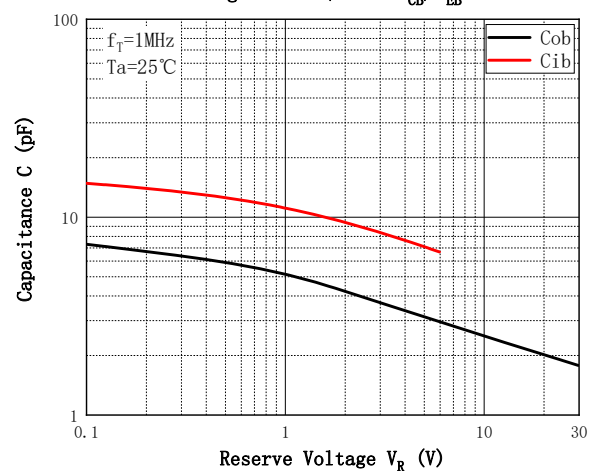


Fig.6 - Cob/Cib—Vcb/Veb





■BC857BHQ/BC858BHQ Characteristics (Typical)

Fig. 1-Static Characteristic

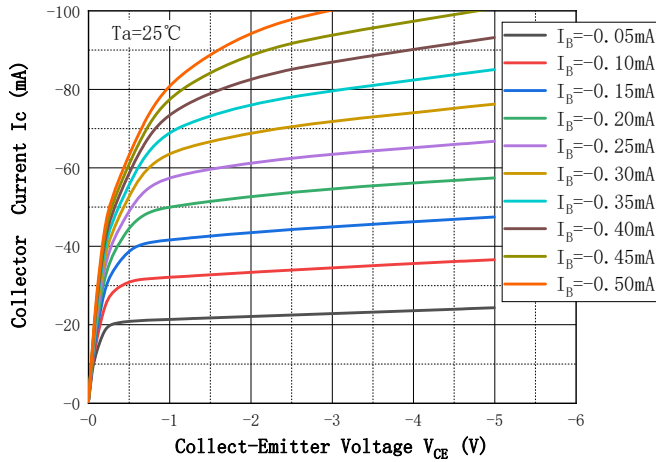


Fig. 2 - DC Current Gian

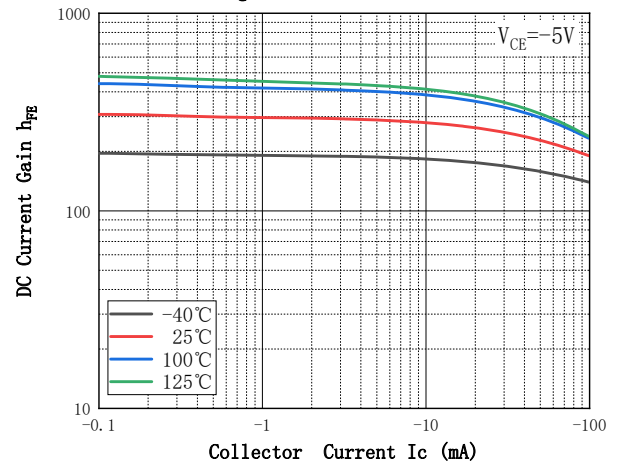


Fig. 3 - Collect-Emittor Saturation Voltage

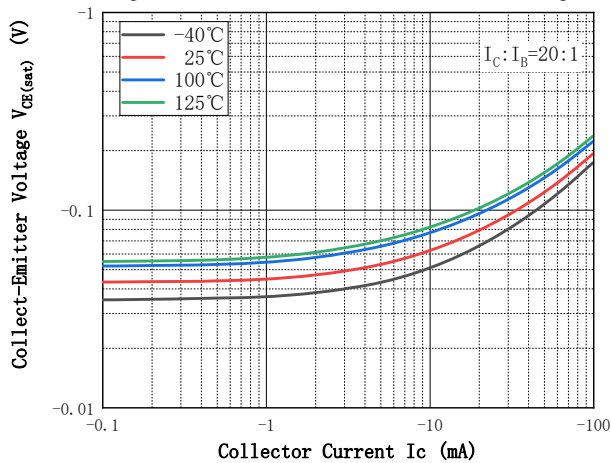


Fig. 4 - Base-Emittor Voltage

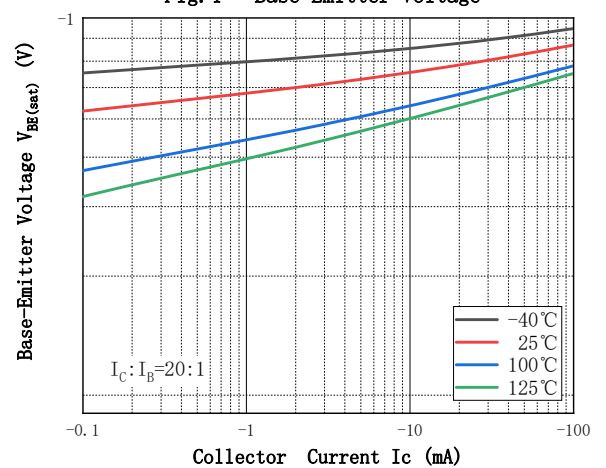


Fig. 5 - Base-Emittor On Voltage

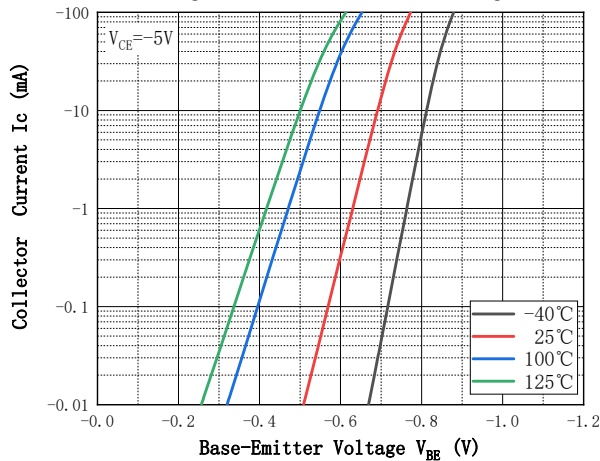
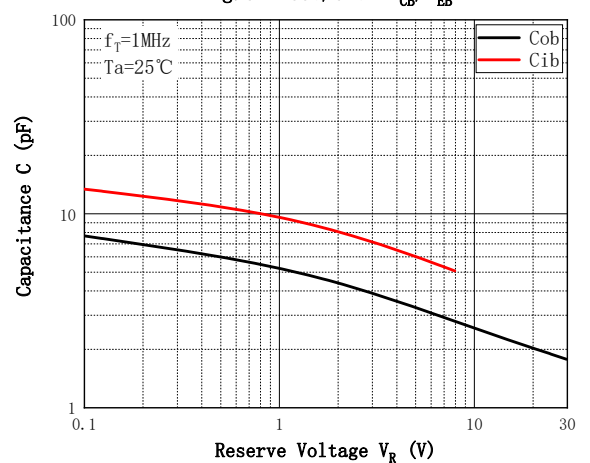


Fig. 6 - Cob/Cib— V_{CE}/V_{EB}





■BC857CHQ/BC858CHQ Characteristics (Typical)

Fig.1-Static Characteristic

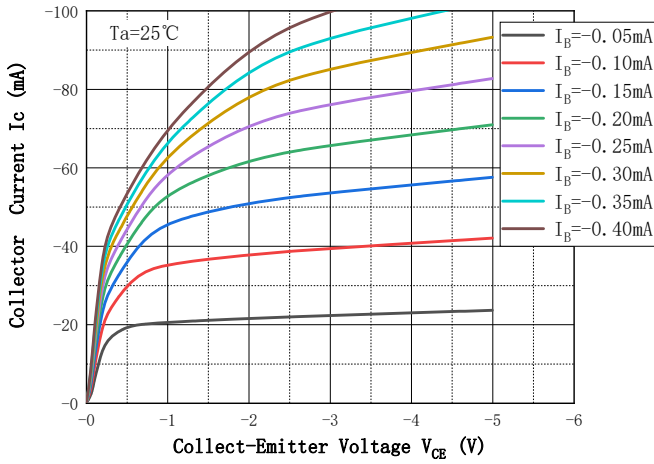


Fig.2 - DC Current Gian

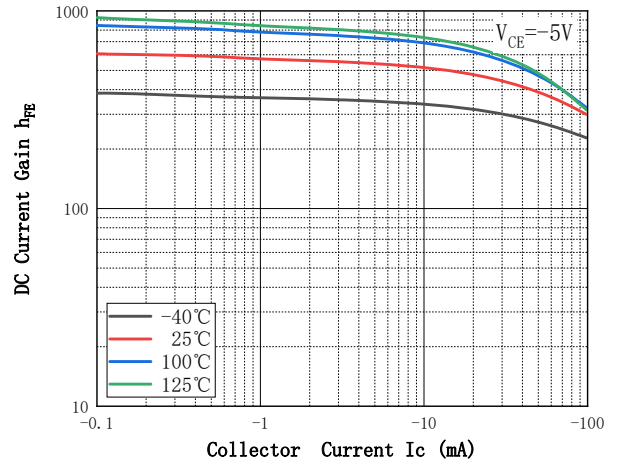


Fig.3 - Collect-Emitter Saturation Voltage

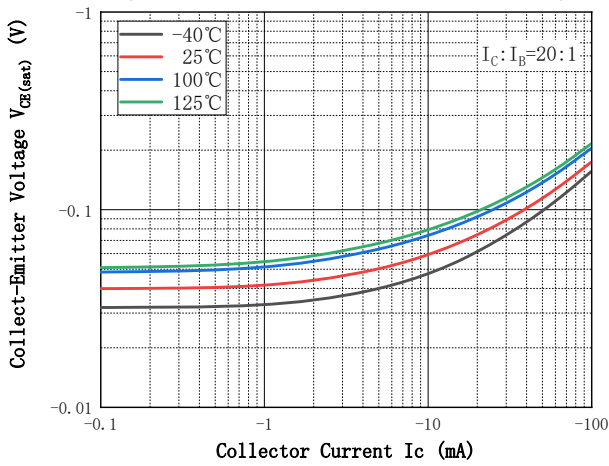


Fig.4 - Base-Emitter Voltage

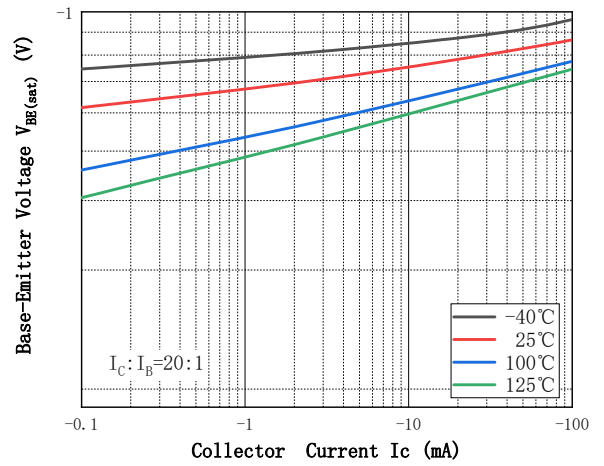


Fig.5 - Base-Emitter On Voltage

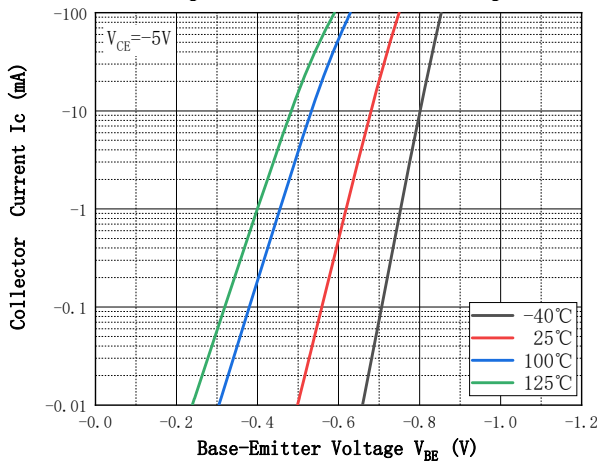
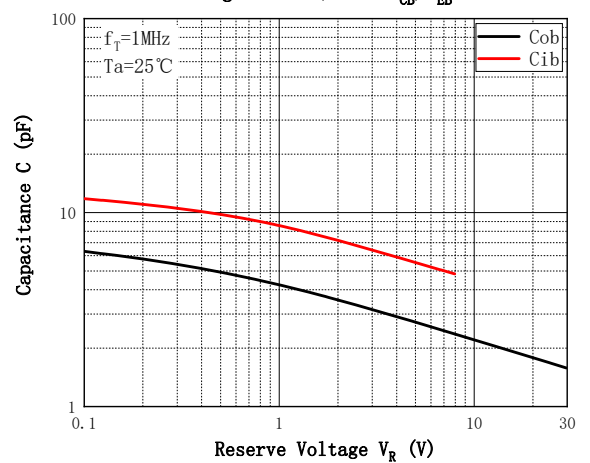
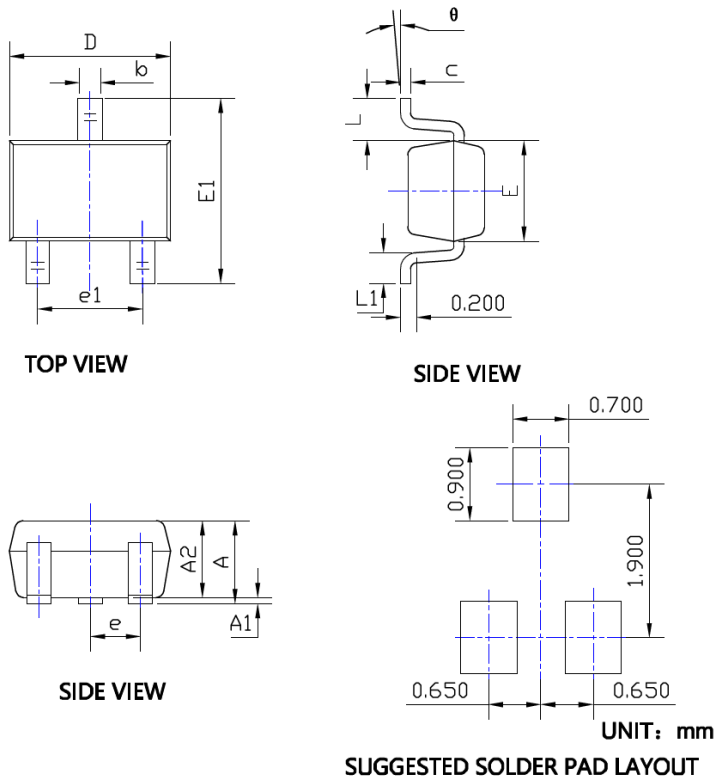


Fig.6 - Cob/Cib—Vce/Vbe



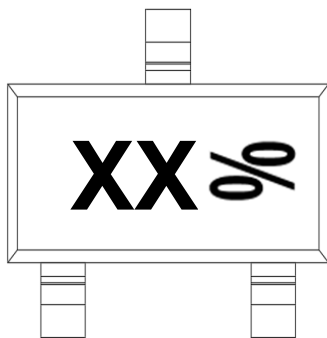
■ SOT-323 Package Outline Dimensions & Suggested Pad Layout



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026TYP		0.650TYP	
e1	0.047	0.055	1.200	1.400
L	0.021REF		0.525REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

NOTE:
 1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
 2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
 3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

■ Marking Information



PN	Marking Code
BC856AHQ	3A %
BC856BHQ	3B %
BC857AHQ	3E %
BC857BHQ	3F %
BC857CHQ	3G %
BC858AHQ	3J %
BC858BHQ	3K %
BC858CHQ	3L %

Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black
4. XX% is Marking Code (%=placeholder for date code)

*Date Code vary depending upon production date.



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