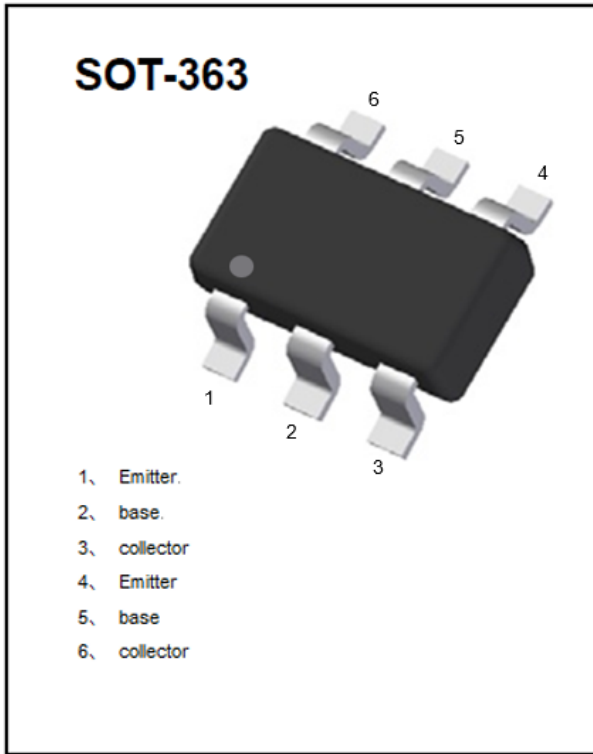


Dual PNP Small Signal Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating
- Reduces number of components and board space
- No mutual interference between the transistors
- Part no. with suffix "HQ" means AEC-Q101 qualified

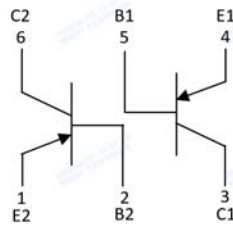
Application

- General purpose Switching and Amplification

Mechanical Data

- Package: SOT-363
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

Equivalent circuit



■Maximum Ratings (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Value
Collector-Base Voltage	V_{CBO}	V	-80
Collector-Emitter Voltage	V_{CEO}	V	-65
Emitter-Base Voltage	V_{EBO}	V	-5
Collector Current	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



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

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	V_{CBO}	V	$I_C = -10\mu A, I_E = 0$	-80		
Collector-emitter breakdown voltage	V_{CEO}	V	$I_C = -10mA, I_B = 0$	-65		
Emitter-base breakdown voltage	V_{EBO}	V	$I_E = -10\mu A, I_C = 0$	-5		
Collector-Base cut-off current	I_{CBO}	nA	$V_{CB} = -30V, I_B = 0$			-15
Emitter-Base cut-off current	I_{EBO}	nA	$V_{EB} = -5V, I_C = 0$			-100
DC current gain	h_{FE}		$V_{CE} = -5V, I_C = -2mA$	220		475
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = -10mA, I_B = -0.5mA$			-0.3
			$I_C = -100mA, I_B = -5mA$			-0.65
Base-emitter Voltage	V_{BE}	V	$V_{CE} = -5V, I_C = -2mA$	-0.6		-0.75
			$V_{CE} = -5V, I_C = -10mA$			-0.82
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
BC856BSHQ	F2	Approximate 0.007g	3000	30000	120000	7" reel

■ Characteristics (Typical)

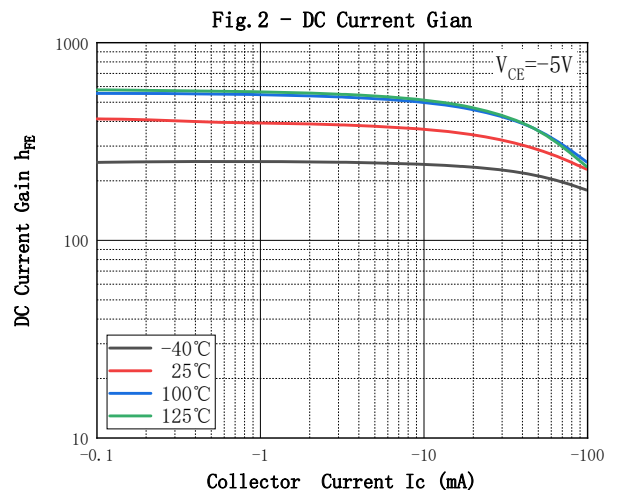
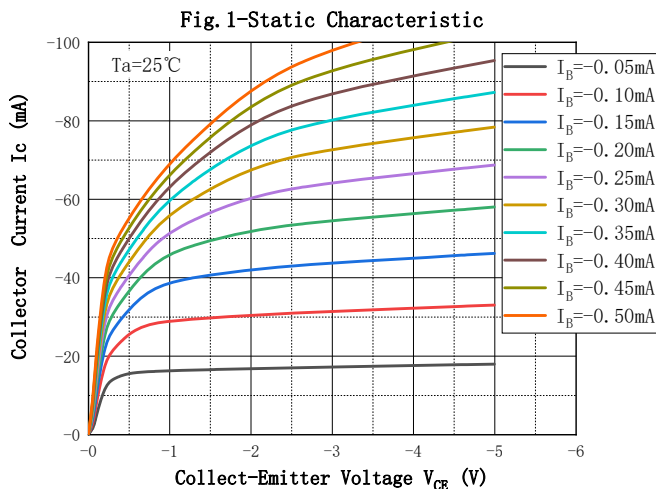




Fig. 3 - Collect-Emmitter Saturation Voltage

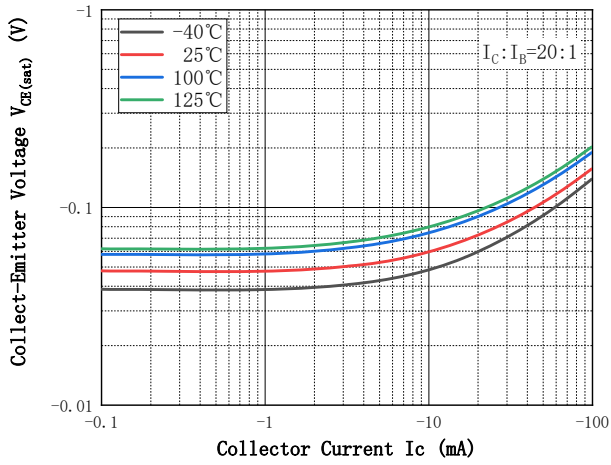


Fig. 4 - Base-Emmitter Voltage

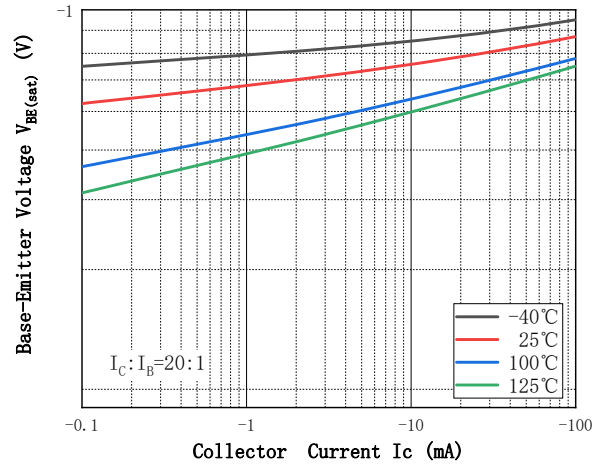


Fig. 5 - Base-Emmitter On Voltage

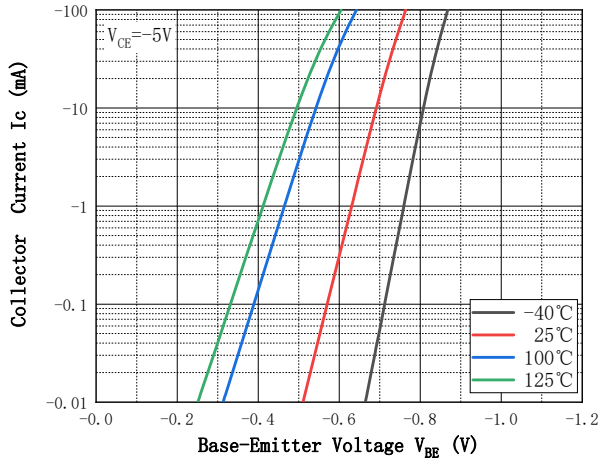
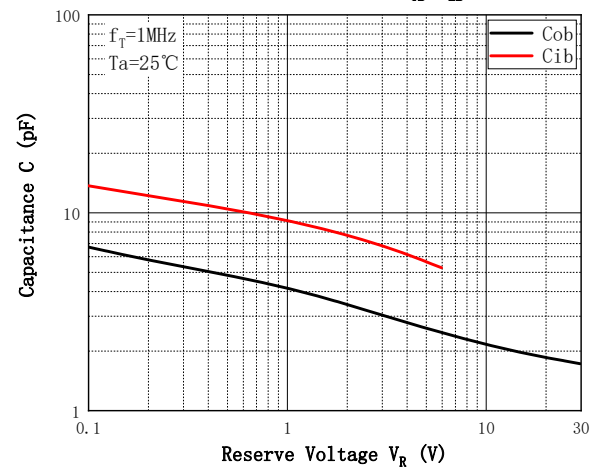


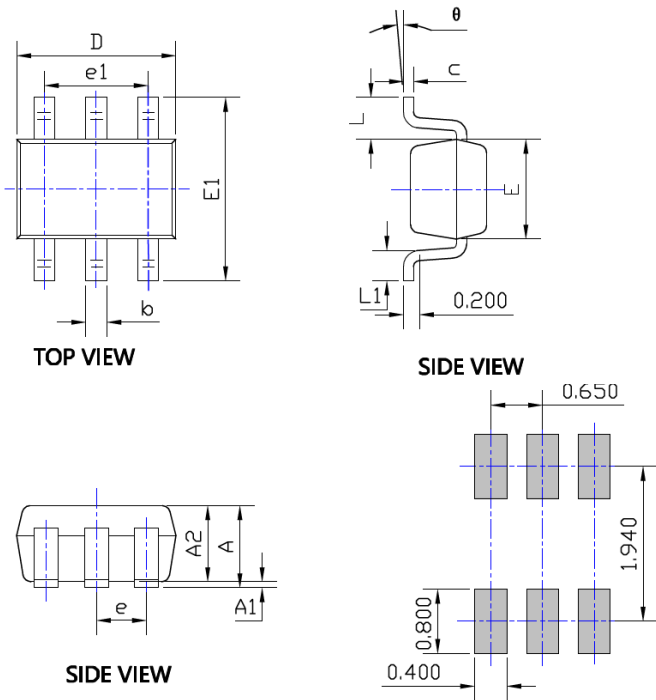
Fig. 6 - $C_{ob}/C_{ib}-V_{CE}/V_{EB}$





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■ SOT-363 Package Outline Dimensions & Suggested Pad Layout



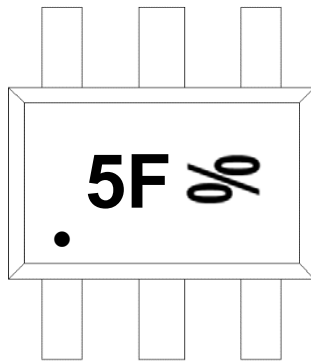
SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.014	0.150	0.350
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026TYP		0.650TYP	
e1	0.047	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.

UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black
4. 5F% is Marking Code (%=placeholder for date code)

*Date Code vary depending upon production date.



BC856BSHQ

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