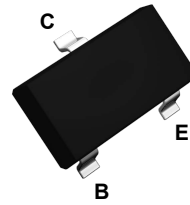
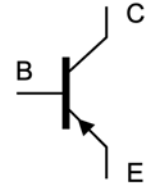


Features

- Low current
- Low voltage
- RoHS compliant



SOT-23



Schematic Diagram

Applications

- For general purpose amplifier applications



Absolute Maximum Ratings

(T_A=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V _{CBO}	-80	V
Collector to Emitter Voltage	V _{CEO}	-65	V
Emitter to Base Voltage	V _{EBO}	-5.0	V
Collector Current-Continuous	I _C	-100	mA
Collector Power Dissipation	P _C	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-65 to +150	°C

h_{FE} Classifications

h _{FE} Classifications Symbol	A	B
h _{FE} Range	125 - 250	220 - 475

Electrical Characteristics

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-30\text{V}$, $I_E=0$	-	-	-15	nA
DC Current Gain	h_{FE}	$V_{CE}=-5.0\text{V}$, $I_C=-2.0\text{mA}$	125	-	475	-
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-10\text{mA}$, $I_B=-0.5\text{mA}$	-	-0.09	-0.3	V
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}$, $I_B=-5.0\text{mA}$	-	-0.25	-0.65	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-10\text{mA}$, $I_B=-0.5\text{mA}$	-	-0.7	-	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100\text{mA}$, $I_B=-5.0\text{mA}$	-	-0.9	-	V
Base to Emitter Voltage _(ON)	$V_{BE(ON)}$	$V_{CE}=-5.0\text{V}$, $I_C=-2.0\text{mA}$	-0.6	-0.65	-0.75	V
Base to Emitter Voltage _(ON)	$V_{BE(ON)}$	$V_{CE}=-5.0\text{V}$, $I_C=-10\text{mA}$	-	-	-0.82	V
Transition Frequency	f_T	$V_{CE}=-5.0\text{V}$, $I_C=-10\text{mA}$, $F=100\text{MHz}$	-	150	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $I_E=0$, $F=1.0\text{MHz}$	-	4.5	-	pF
Noise Figure	N_F	$V_{CE}=-6.0\text{V}$, $I_C=-0.1\text{mA}$, $R_g=2\text{K}\Omega$, $F=1.0\text{KHz}$	-	2.0	10	dB

Electrical Characteristic Curve

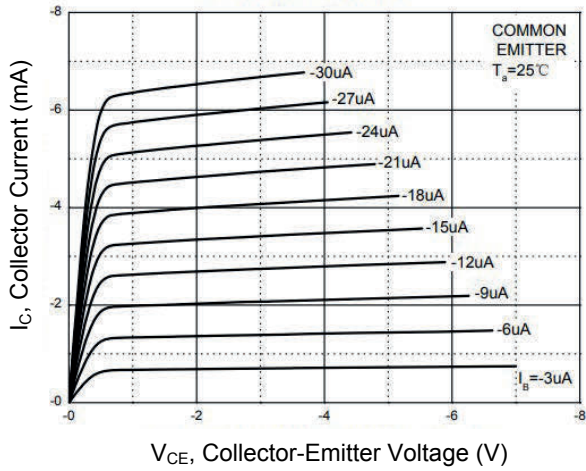


Figure 1. Static Characteristic

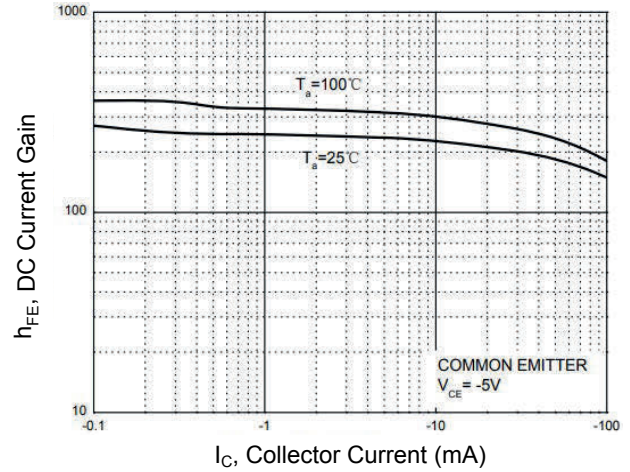


Figure 2. $h_{FE} - I_C$

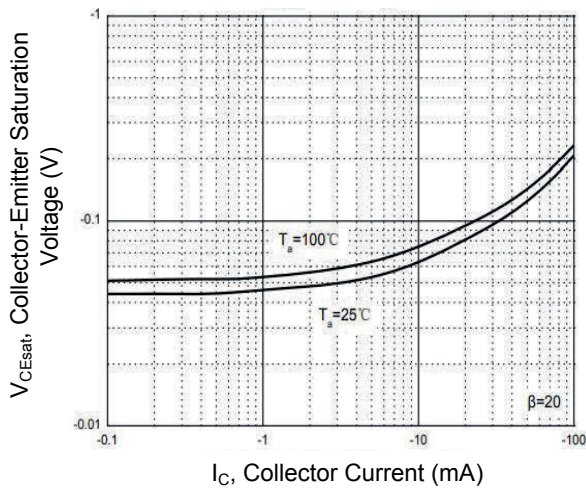


Figure 3. $V_{CEsat} - I_C$

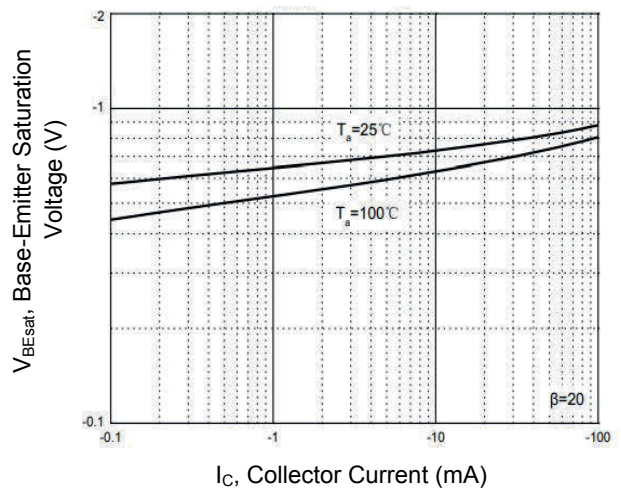


Figure 4. $V_{BEsat} - I_C$

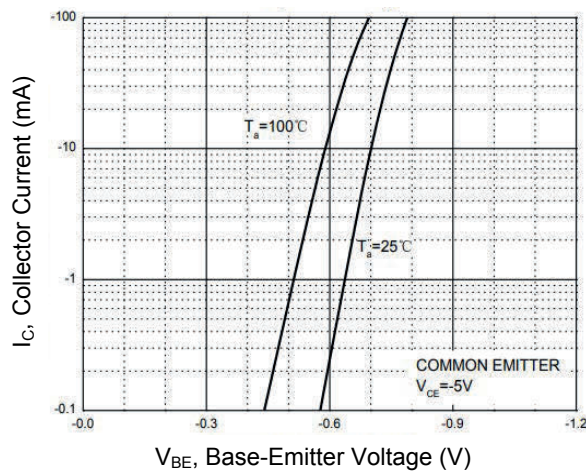


Figure 5. $I_C - V_{BE}$

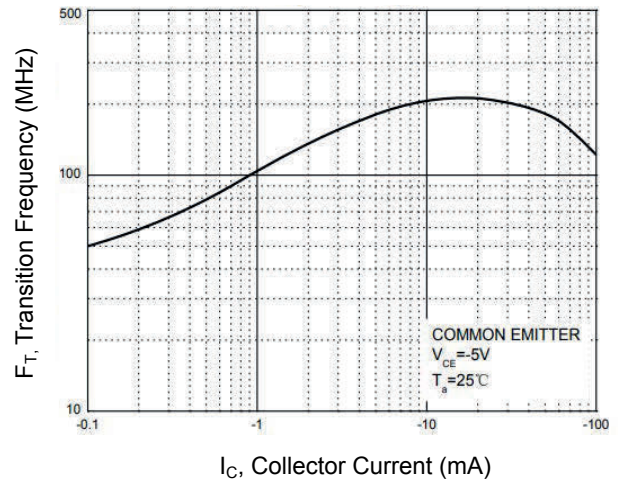


Figure 6. $F_T - I_C$

Electrical Characteristic Curve

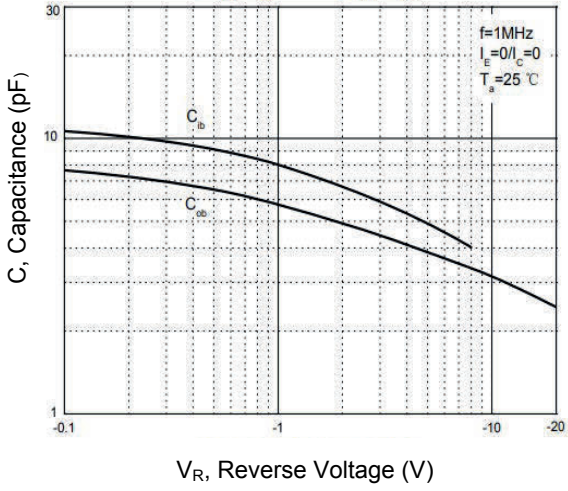


Figure 7. $C_{ob}/C_{ib} - V_{CB}/V_{EB}$

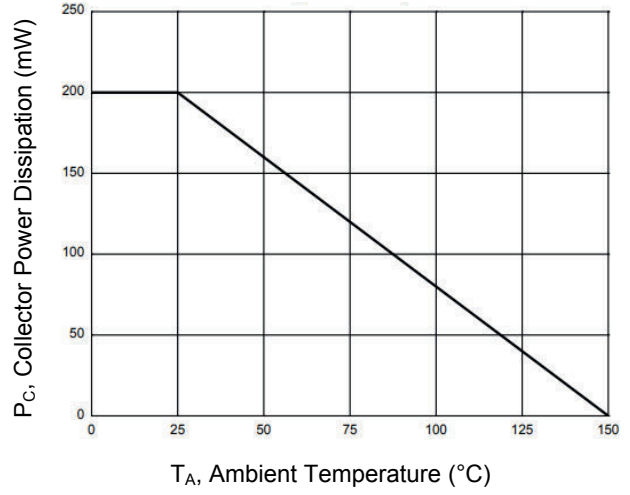
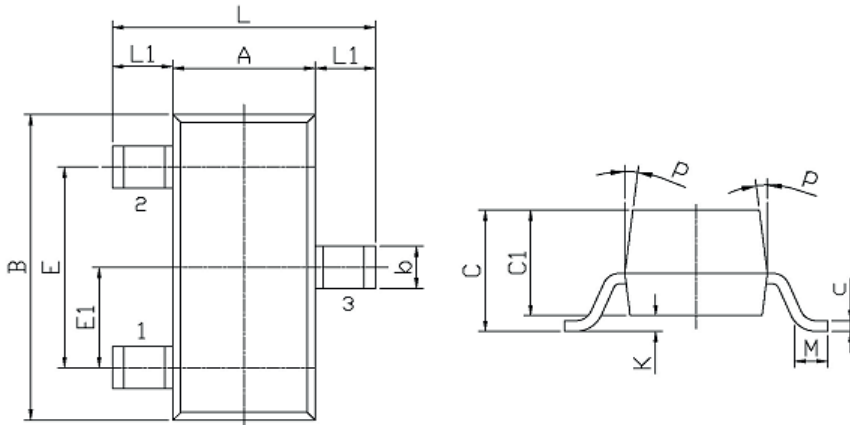


Figure 8. $P_C - T_A$

Package Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
L	2.20	2.70	0.087	0.106
L1	0.45	0.65	0.018	0.026
A	1.15	1.50	0.045	0.059
B	2.70	3.10	0.106	0.122
E	1.70	2.10	0.067	0.083
E1	0.85	1.05	0.033	0.041
b	0.35	0.55	0.014	0.022
C	1.30 Max		0.051 Max	
C1	0.90	1.20	0.035	0.047
c	0.05	0.20	0.002	0.008
K	0.00	0.10	0.000	0.004
M	0.20 Min		0.008 Min	
P	7°		7°	

Order Information

Device	Package	Marking	Packaging	SPQ
BC856A	SOT-23	3A	Tape & Reel	3,000pcs / 7" Reel
BC856B	SOT-23	3B	Tape & Reel	3,000pcs / 7" Reel