

SOT-23 Plastic-Encapsulate Transistors

Features

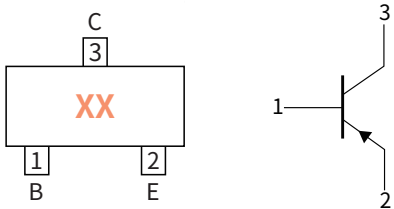
- Complementary to BC846 THRU BC848
- Power dissipation of 200mW
- High stability and high reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Mechanical Data

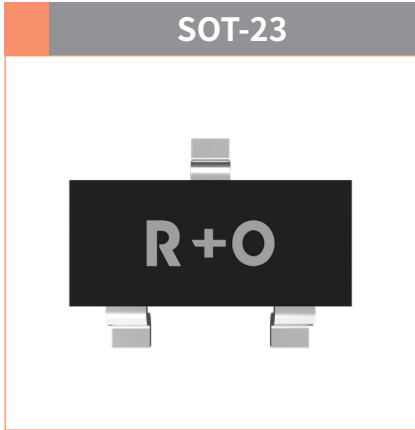
- Case: SOT-23
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant,halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram

XX = Device Code
3A = BC856A,3B = BC856B
3E = BC857A,3F = BC857B,3G = BC857C
3J = BC858A,3K = BC858B,3L = BC858C



Collector-Base Voltage
VCBO -80V/-50V/-30
Collector Current
-0.1Ampere



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

PARAMETER	SYMBOL	UNIT	CONDLITIONS	VALUE
Collector-Base Voltage	V _{CBO}	V	BC856	-80
			BC857	-50
			BC858	-30
Collector-Emitter Voltage	V _{CEO}		BC856	-65
			BC857	-45
			BC858	-30
Emitter-Base Voltage	V _{EBO}		I _C =0, I _E =-10μA	-5.0
Collector Current	I _C	A	—	-0.1
Collector Power Dissipation	P _C	mW	—	200
Storage temperature	T _{stg}	°C	—	-55 ~+150
Junction temperature	T _j	°C	—	-55 ~+150
Typical Thermal Resistance	R _{θJ-A}	°C /W	—	625

Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-23	R1	0.008	3000	45000	180000	7"

Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition		Min	Max	
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=-10\mu A, I_E=0$		BC856	-80	—
					BC857	-50	—
					BC858	-30	—
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$		$I_C=-10mA, I_E=0$		BC856	-65	—
					BC857	-45	—
					BC858	-30	—
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$		$I_E=-10\mu A, I_C=0$			-5.0	—
Collector-Base cut-off current	I_{CBO}	μA	BC856	$V_{CB}=-70V$	—	-0.1	
			BC857	$V_{CB}=-45V$	—	-0.1	
			BC858	$V_{CB}=-25V$	—	-0.1	
Collector-Emitter cut-off current	I_{CEO}		BC856	$V_{CE}=-60V$	—	-0.1	
			BC857	$V_{CE}=-40V$	—	-0.1	
			BC858	$V_{CE}=-25V$	—	-0.1	
Emitter-Base cut-off current	I_{EBO}		$V_{EB}=-5.0V, I_C=0$			—	-0.1
DC Current Gain	h_{FE}	—	BC856A,857A,858A	$I_C=-2mA \ V_{CE}=-5.0V$	125	250	
			BC856B,857B,858B		220	475	
			BC857C,BC858C		420	800	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=-100mA \ I_B=-5mA$		—	-0.5	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=-100mA \ I_B=-5mA$		—	-1.1	

Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Max
Transition frequency	f_T	$I_C=-10mA, V_{CE}=-5V, f=100MHz$	MHz	100	—

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

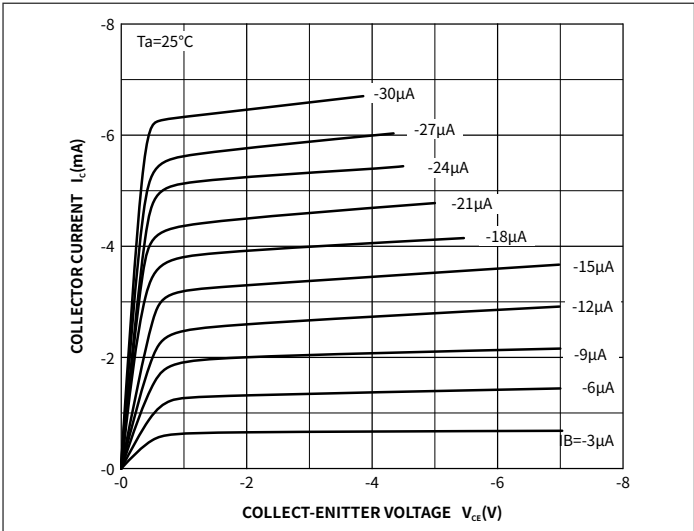


Fig.1 Static Characteristic

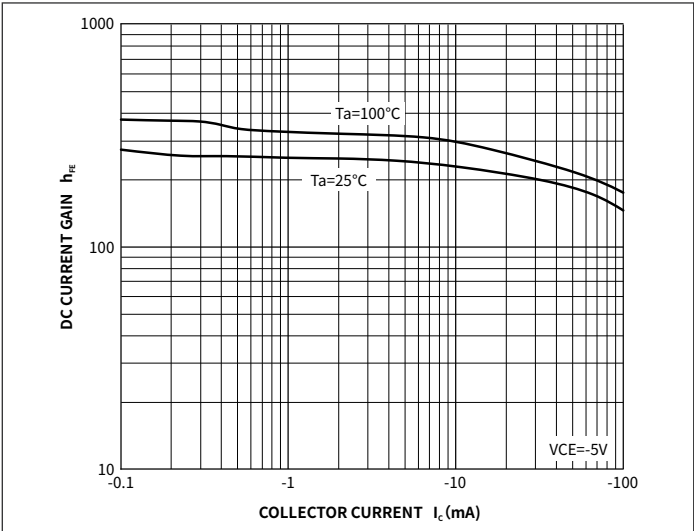


Fig.2 DC Current Gain

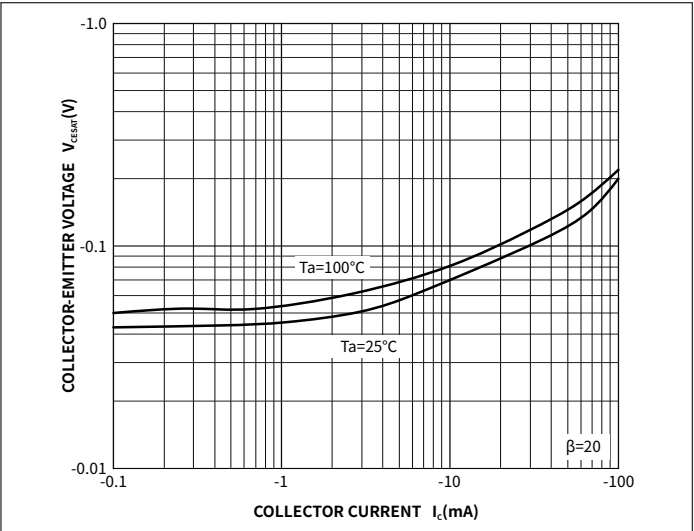


Fig.3 Collector-Emitter Saturation Voltage

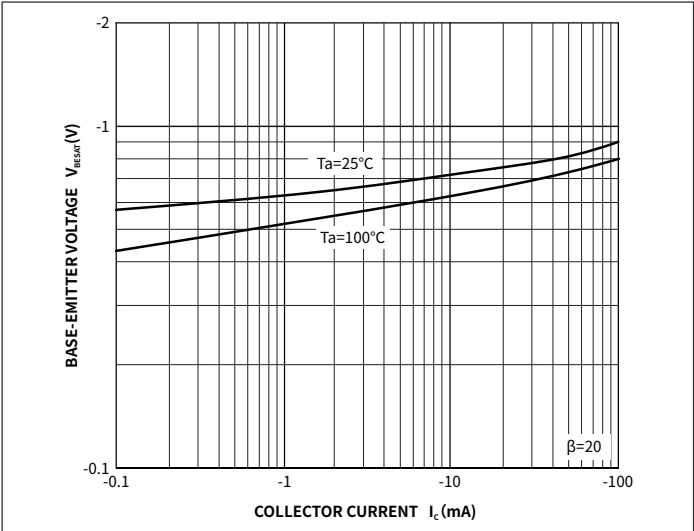


Fig.4 Base-Emitter Saturation Voltage

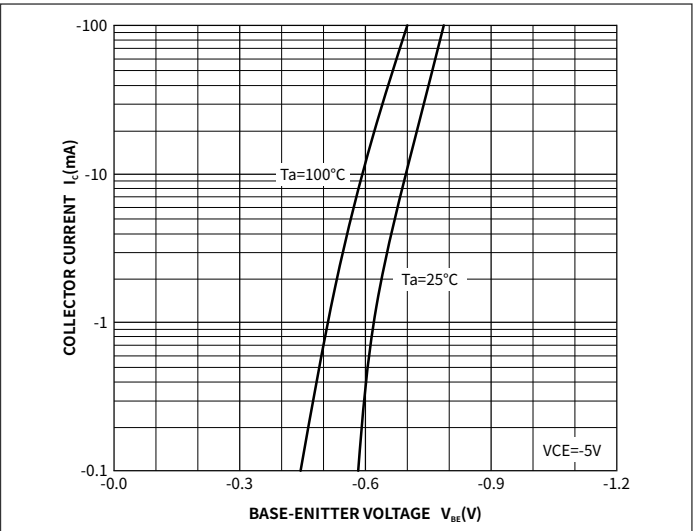


Fig.5 Base-Emitter On Voltage

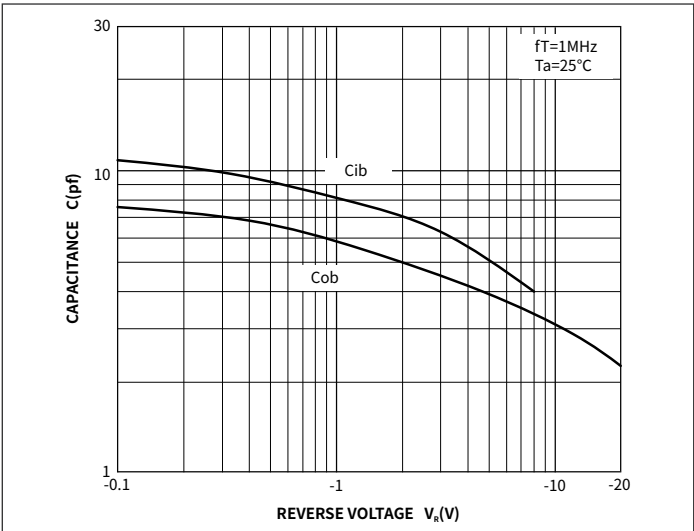
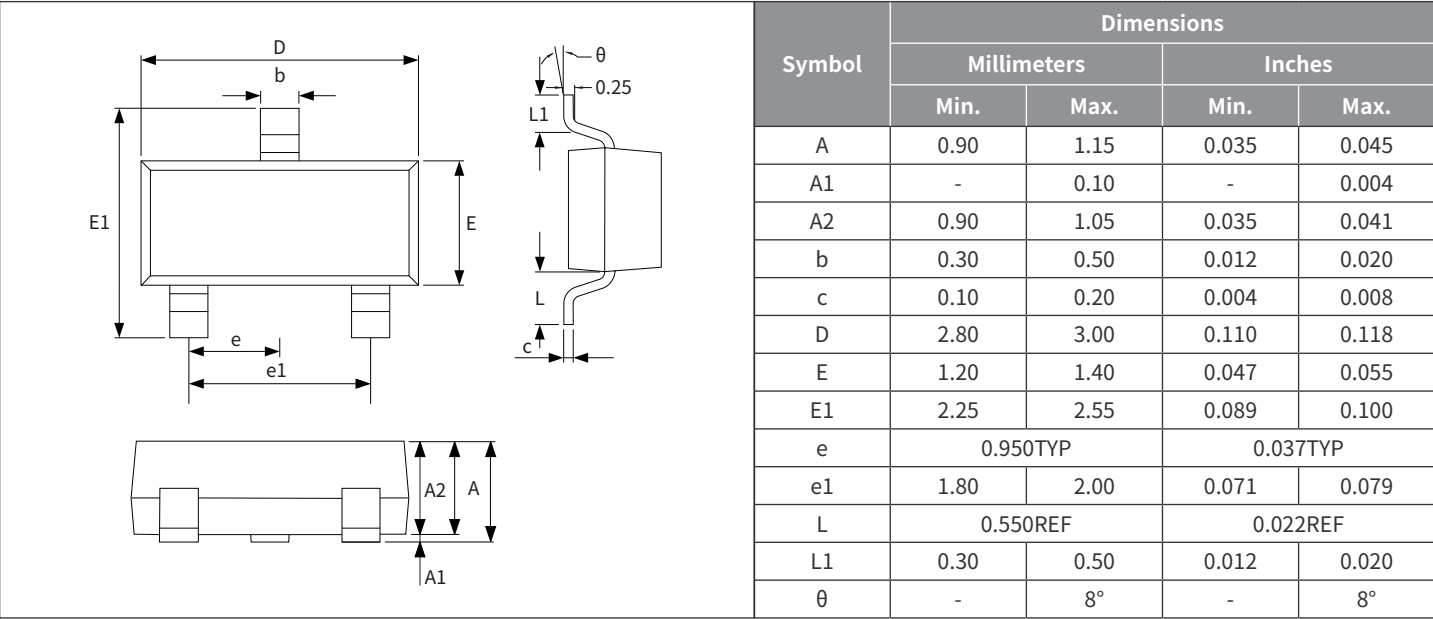


Fig.6 Cob/Cib-V_{cb} V_{EB}

● Package Outline Dimensions (SOT-23)



● Suggested Pad Layout

