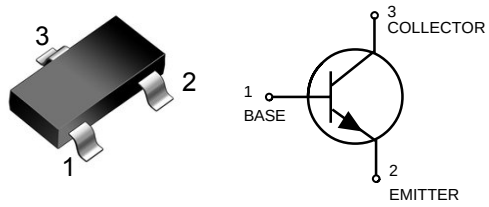
SOT-23



Features

As complementary type the PNP transistor BC856/BC857/BC858 is recommended
For switching and AF amplifier applications
Epitaxial planar die construction
Halogen free and RoHS compliant

MARKING:

BC846A=1A	BC846B=1B	
BC847A=1E	BC847B=1F	BC847C=1G
BC848A=1J	BC848B=1K	BC848C=1L

Mechanical Data

SOT-23 Small Outline Plastic Package
Epoxy UL: 94V-0

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel,7" reel	3000	EIA-481-1

Maximum Ratings & Thermal Characteristics

(Ratings at 25℃ ambient temperature unless otherwise specified.)

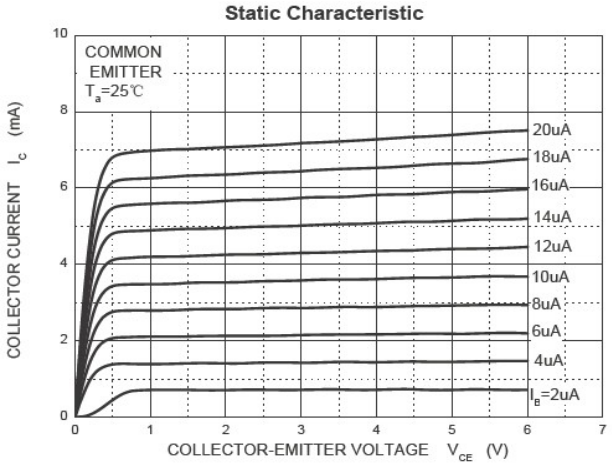
Parameters	Symbol		Value	Unit
Collector-Base Voltage	V_{CBO}	BC846 BC847 BC848	80 50 30	V
Collector-Emitter Voltage	V_{CEO}	BC846 BC847 BC848	65 45 30	V
Emitter -Base Voltage	V_{EBO}		6	V
Collector Current-Continuous	I_C		100	mA
Collector Power Dissipation	P_C		200	mW
Junction Temperature	T_j		150	℃
Storage Temperature	Tstg		-55-+150	℃
Thermal resistance From junction to ambient	$R_{\theta JA}$		625	℃/W

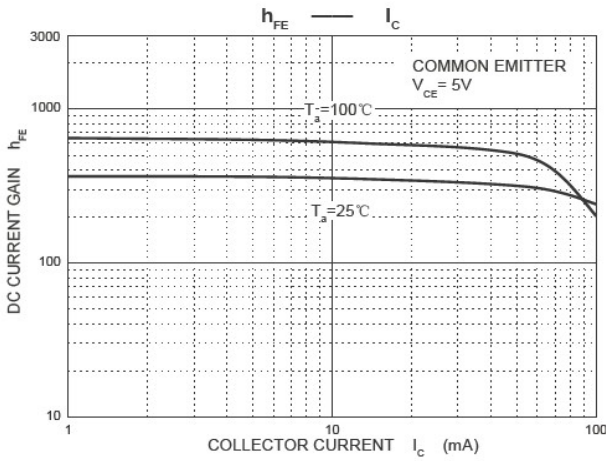
Electrical Characteristics

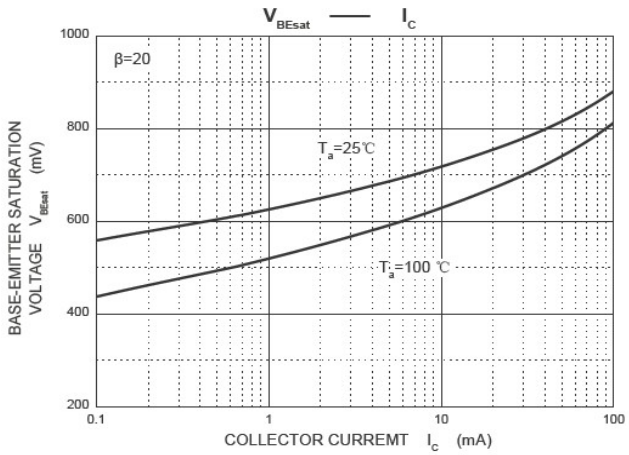
(Ratings at 25℃ ambient temperature unless otherwise specified).

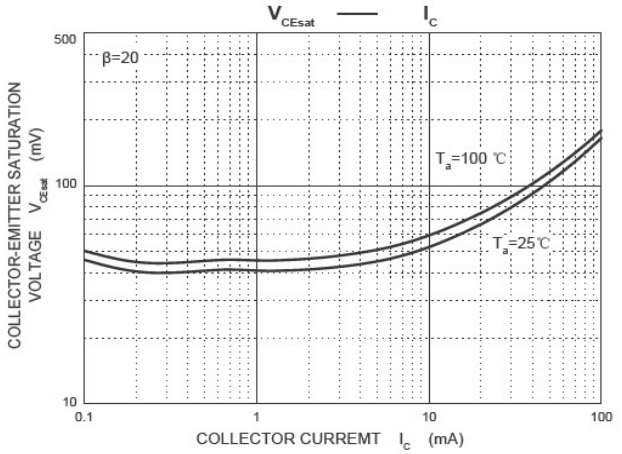
Parameter	Symbols	Test Condition		Limits Min	Limits Max	Unit
Collector-base breakdown voltage	**$V_{(BR)CBO}$**	I_C=10uA, I_E=0	BC846 BC847 BC848	80 50 30		V
Collector-emitter breakdown voltage	**$V_{(BR)CEO}$**	I_C=10mA, I_B=0	BC846 BC847 BC848	65 45 30		V
Emitter-base breakdown voltage	**$V_{(BR)EBO}$**	I_E=10uA, I_C=0		6		V
Collector cut-off current	**I_{CBO}**	V_{CB}=70V, I_E=0 V_{CB}=50V, I_E=0 V_{CB}=30V, I_E=0	BC846 BC847 BC848		100	nA
Collector cut-off current	**I_{CEO}**	V_{CE}=60V, I_B=0 V_{CE}=45V, I_B=0 V_{CE}=30V, I_B=0	BC846 BC847 BC848		100	nA
Emitter cut-off current	**I_{EBO}**	V_{EB}=5V, I_C=0			100	nA
DC current gain	**h_{FE}**	V_{CE}=5V, I_C=2mA	BC846A;BC847A;BC848A BC846B;BC847B;BC848B BC847C;BC848C	110 200 420	220 450 800	
Collector-emitter saturation voltage	**$V_{CE(sat)}$**	I_C=100mA, I_B=5mA			0.50	V
Base -emitter saturation voltage	**$V_{BE(sat)}$**	I_C=100mA, I_B=5mA			1.10	V
Transition frequency	**f_T**	V_{CE}=5V, I_C=10mA,f=100MHz		100		MHz
Collector output capacitance	**C_{ob}**	V_{CB}=10V, f=1MHz			4.5	pF

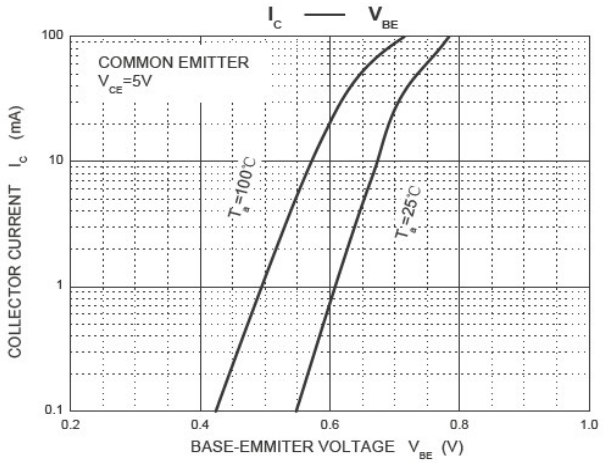
Ratings and Characteristic Curves

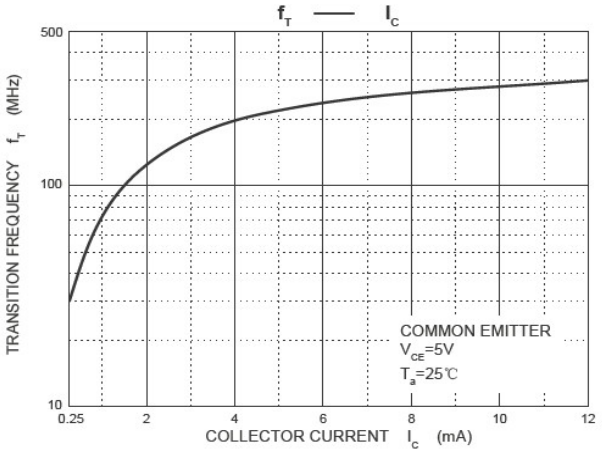




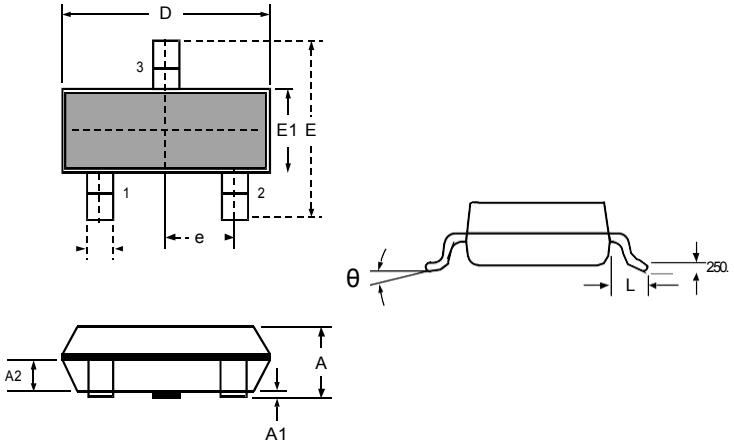








Package Outline Dimensions: SOT-23



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
θ	0	8°	0	8°