

BC846,BC847,BC848 SERIES

NPN GENERAL PURPOSE TRANSISTORS

VOLTAGE 30/45/65 Volt **POWER** 200 mWatt

SOT-23

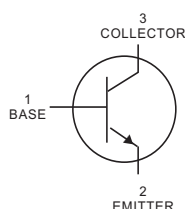
Unit:mm

FEATURES

- General purpose amplifier applications
- NPN epitaxial silicon, planar design
- For switching and AF amplifier applications
- Ideally suited for automatic insertion
- Lead free in compliance with EU RoHS

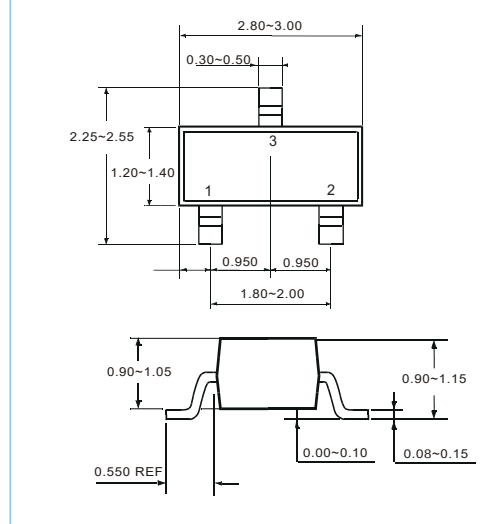
MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



DEVICE MARKING

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



MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	BC846	80
		BC847	50
		BC848	30
V _{CEO}	Collector-Emitter Voltage	BC846	65
		BC847	45
		BC848	30
V _{EB0}	Emitter-Base Voltage	6	V
I _C	Collector Current –Continuous	0.1	A
P _C	Collector Power Dissipation	200	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

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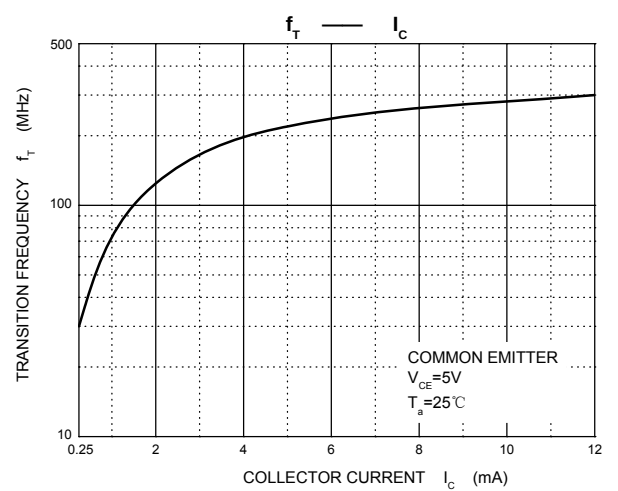
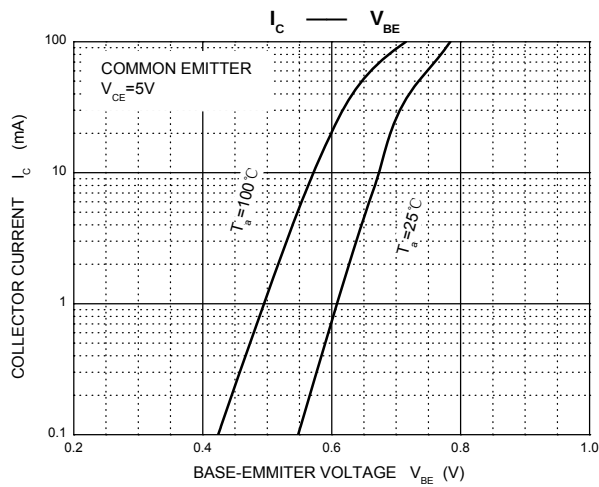
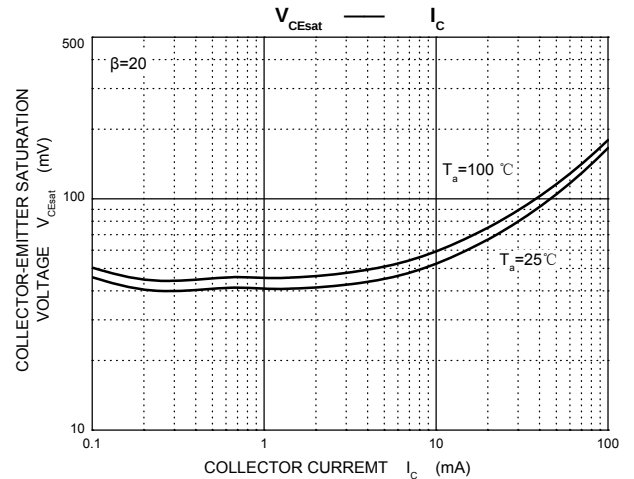
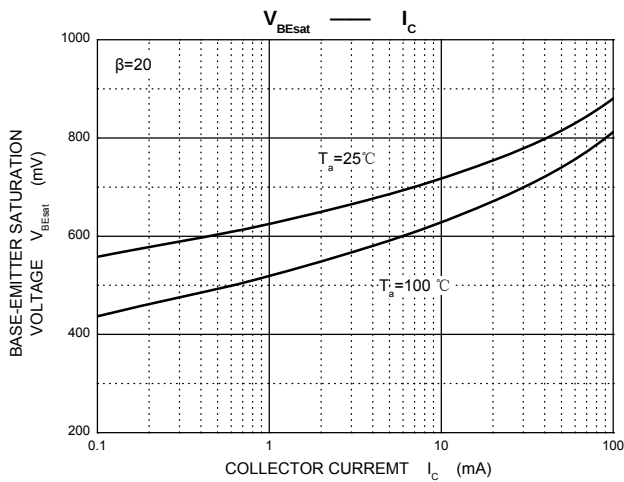
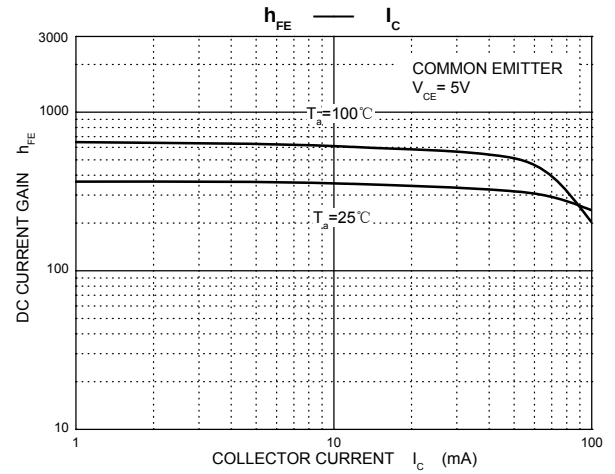
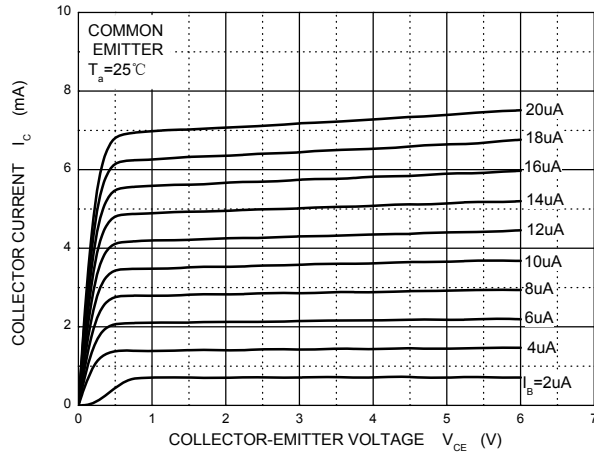
ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BC846 BC847 BC848	V_{CBO} $I_C=10\mu\text{A}, I_E=0$	80 50 30		V
Collector-emitter breakdown voltage	BC846 BC847 BC848	V_{CEO} $I_C=10\text{mA}, I_B=0$	65 45 30		V
Emitter-base breakdown voltage		V_{EBO} $I_E=10\mu\text{A}, I_C=0$	6		V
Collector cut-off current	BC846 BC847 BC848	I_{CBO} $V_{CB}=70\text{V}, I_E=0$ $V_{CB}=50\text{V}, I_E=0$ $V_{CB}=30\text{V}, I_E=0$		0.1	μA
Emitter cut-off current		I_{EBO} $V_{EB}=5\text{V}, I_C=0$		0.1	μA
DC current gain	BC846A,847A,848A BC846B,847B,848B BC847C,BC848C	h_{FE} $V_{CE}=5\text{V}, I_C=2\text{mA}$	110 200 420	220 450 800	
Collector-emitter saturation voltage		$V_{CE(sat)}$ $I_C=100\text{mA}, I_B=5\text{mA}$		0.5	V
Base-emitter saturation voltage		$V_{BE(sat)}$ $I_C=100\text{mA}, I_B=5\text{mA}$		1.1	V
Transition frequency		f_T $V_{CE}=5\text{V}, I_C=10\text{mA}$ $f=100\text{MHz}$	100		MHz
Collector output capacitance		C_{ob} $V_{CB}=10\text{V}, f=1\text{MHz}$		4.5	pF

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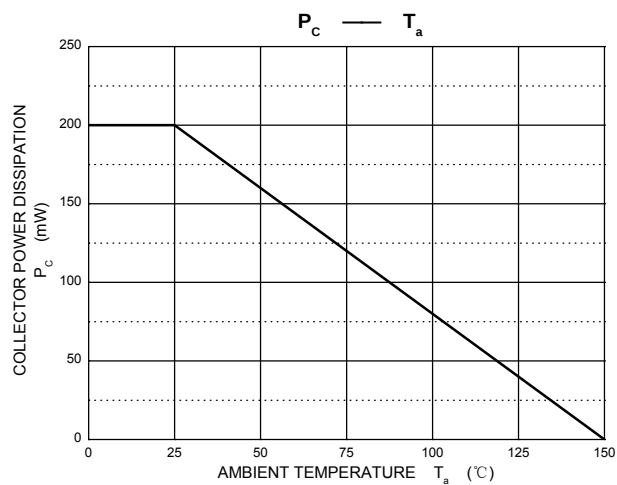
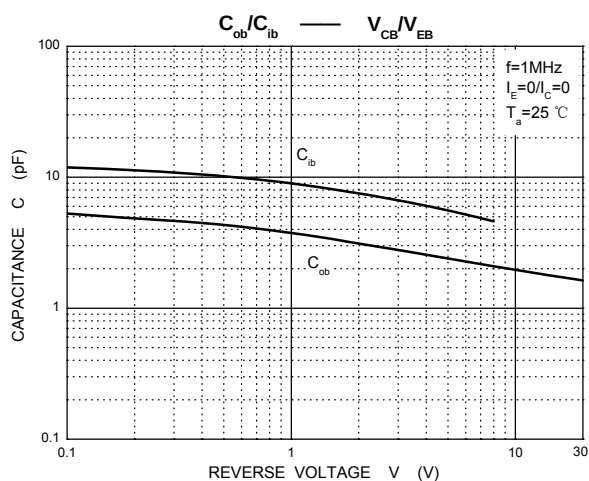
Typical Characteristics

Static Characteristic



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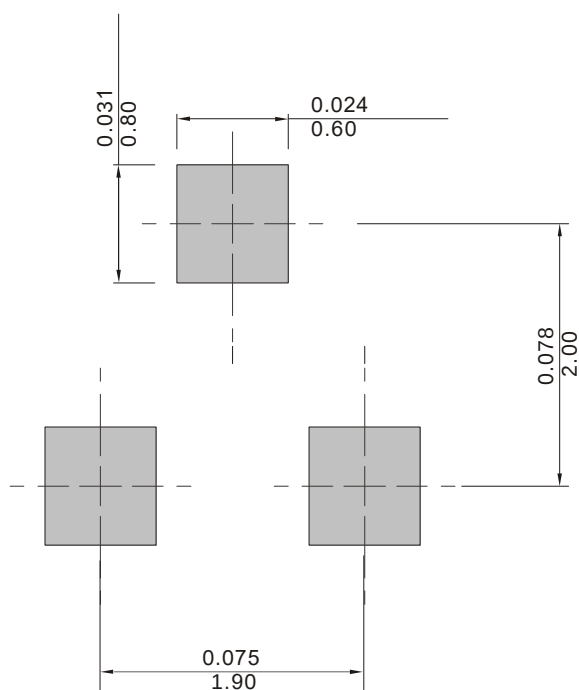


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MOUNTING PAD LAYOUT

SOT-23

Unit:Inch(mm)



ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
BC846,BC847,BC848 SERIES	SOT-23	7 Inch	3000