

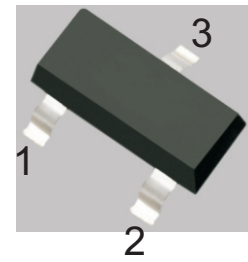


BC846 BC847 BC848  
NPN TRANSISTOR

**FEATURES**

- Ideally suited for automatic insertion
- For switching and AF amplifier applications

**SOT-23**



1.BASE  
2.EMITTER  
3.COLLECTOR

**MAXIMUM RATINGS (Ta=25°C unless otherwise noted)**

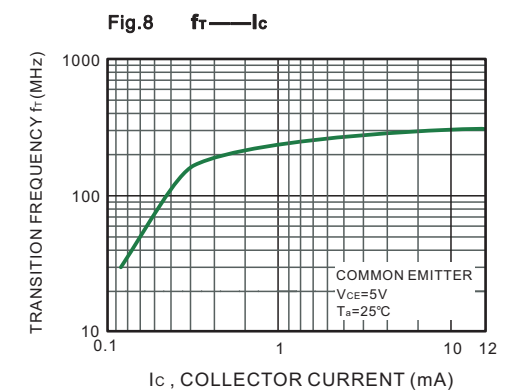
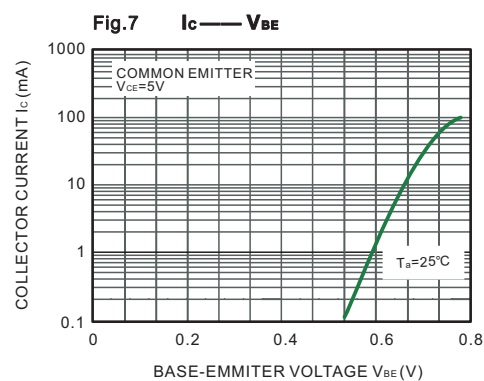
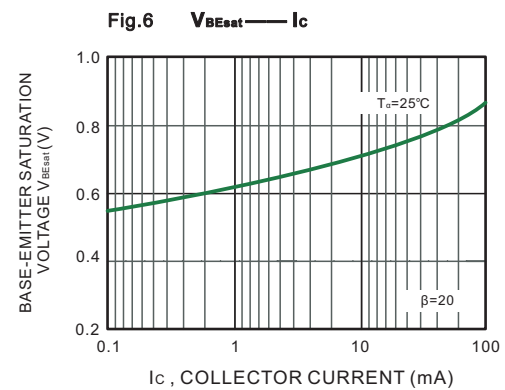
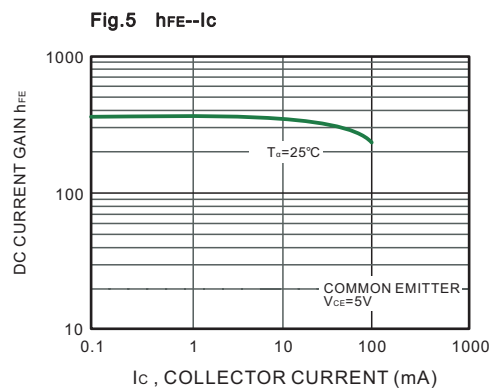
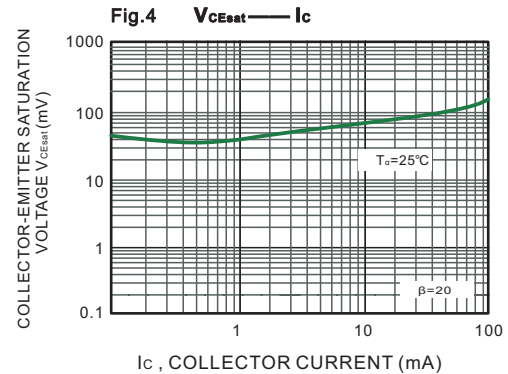
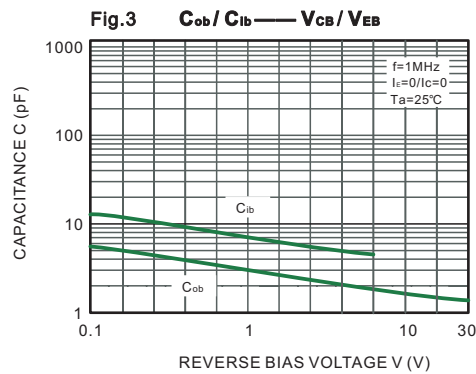
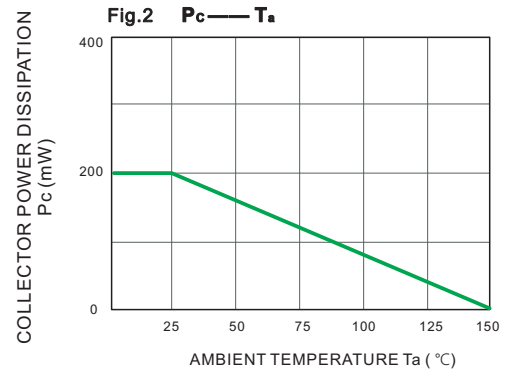
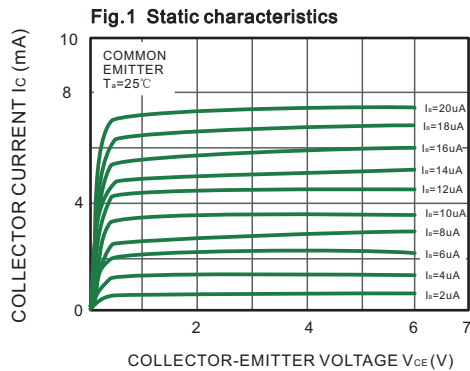
Parameter	Symbol	Value	Unit
Collector-Base Voltage	BC846 BC847 BC848	80 50 30	V
Collector-Emitter Voltage	BC846 BC847 BC848	65 45 30	V
Emitter-Base Voltage	V <sub>EBO</sub>	6	V
Collector Current — Continuous	I <sub>C</sub>	0.1	A
Collector Power Dissipation	P <sub>C</sub>	200	mW
Thermal Resistance From Junction To Ambient	R <sub>thJA</sub>	625	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55~+150	°C

**ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC846 BC847 BC848	V <sub>CB0</sub> I <sub>C</sub> = 10μA, I <sub>E</sub> = 0	80 50 30			V
Collector-emitter breakdown voltage	BC846 BC847 BC848	V <sub>CEO</sub> I <sub>C</sub> = 10mA, I <sub>B</sub> = 0	65 45 30			V
Emitter-base breakdown voltage	V <sub>EBO</sub>	I <sub>E</sub> = 10μA, I <sub>C</sub> = 0	6			V
Collector cut-off current	BC846 BC847 BC848	I <sub>CB0</sub> V <sub>CB</sub> = 70V, I <sub>E</sub> = 0 V <sub>CB</sub> = 50V, I <sub>E</sub> = 0 V <sub>CB</sub> = 30V, I <sub>E</sub> = 0			0.1	μA
Collector cut-off current	BC846 BC847 BC848	I <sub>CEO</sub> V <sub>CE</sub> = 60V, I <sub>B</sub> = 0 V <sub>CE</sub> = 45V, I <sub>B</sub> = 0 V <sub>CE</sub> = 30V, I <sub>B</sub> = 0			0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0			0.1	μA
DC current gain	BC846A,847A,848A BC846B,847B,848B BC847C,BC848C	h <sub>FE</sub> V <sub>CE</sub> =5V,I <sub>C</sub> =2mA	110 200 420		220 450 800	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 100mA, I <sub>B</sub> = 5mA			0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 100mA, I <sub>B</sub> = 5mA			1.1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 10mA, f = 100MHz	100			MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, f = 1MHz			4.5	pF

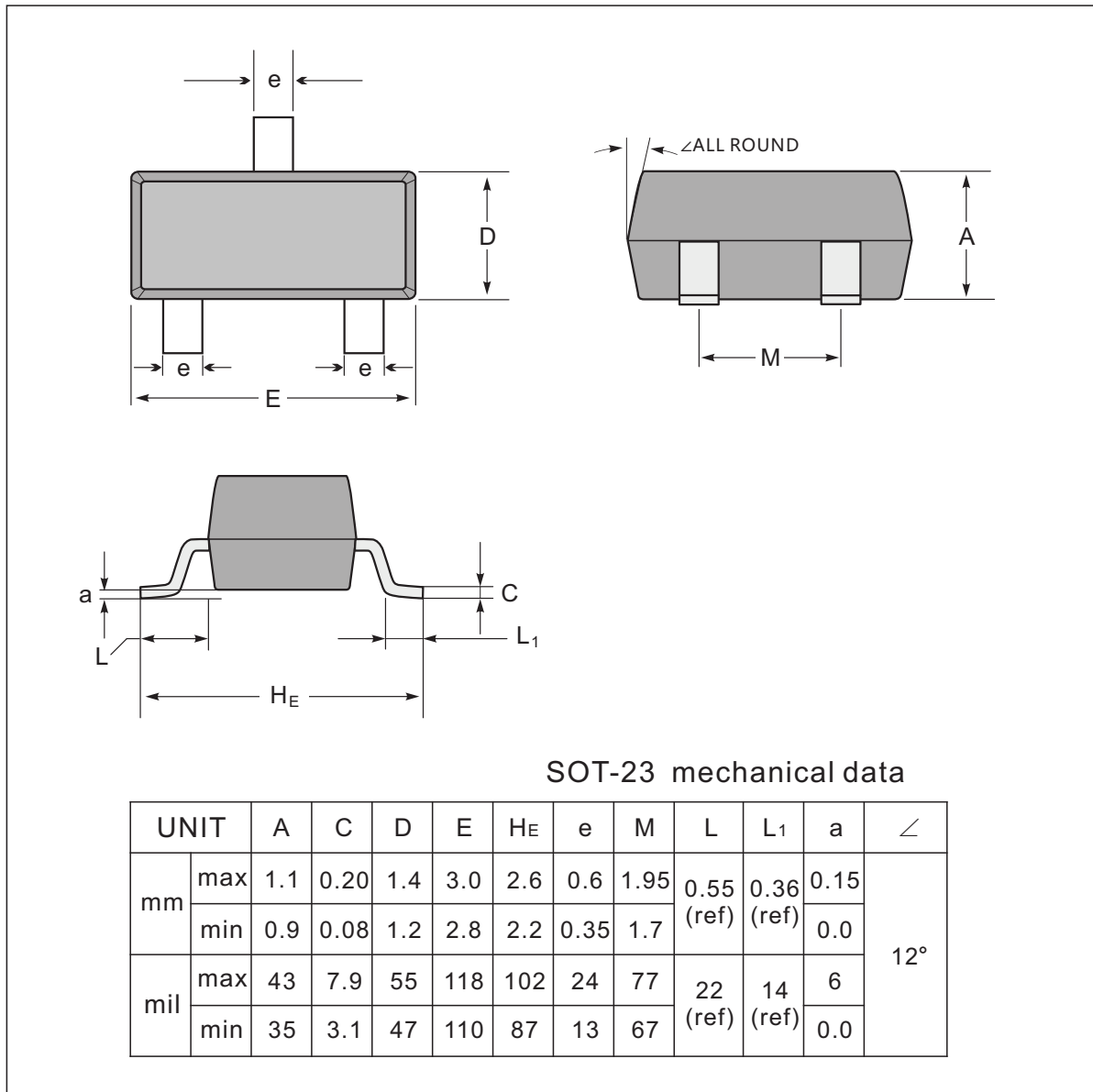


### TYPICAL CHARACTERISTICS

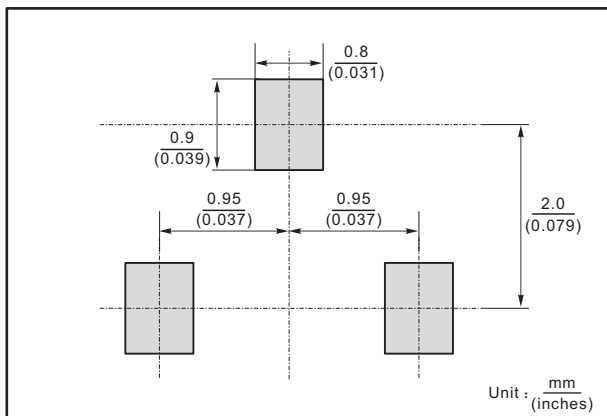




### SOT-23 Package Outline Dimensions



#### The recommended mounting pad size



#### Marking

Type number	Marking code
BC846A	1A
BC846B	1B
BC847A	1E
BC847B	1F
BC847C	1G
BC848A	1J
BC848B	1K
BC848C	1L

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