



SHENZHEN MENGKE ELECTRONICS TECHNOLOGY CO.,LTD

## SOT-23 Plastic-Encapsulate Transistors

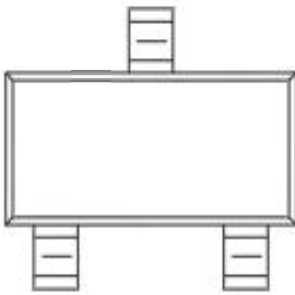
**BC846**

**TRANSISTOR (NPN)**

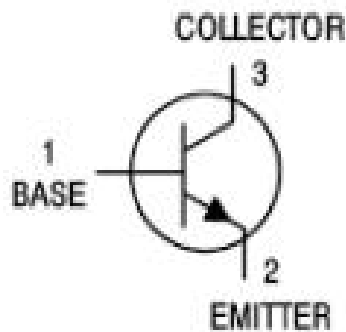
**BC847**

**BC848**

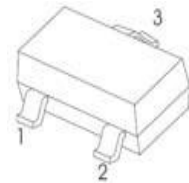
**MARKING:**



**Equivalent Circuit:**



SOT-23



1.BASE  
2.EMITTER  
3.COLLECTOR

**FEATURES:**

Ideally suited for automatic insertion  
For switching and AF amplifier applications

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	80	V
		50	
		30	
Collector-Emitter Voltage	VCEO	65	V
		45	
		30	
Emitter-Base Voltage	VEBO	6	V
Collector Current	IC	0.1	A
Collector Power Dissipation	PC	200	mW
Thermal Resistance From Junction To Ambient	RθJA	625	/W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 +150	°C

**DEVICE MARKING:**

BC846A=1A; BC846B=1B

BC847A=1E; BC847B=1F; BC847C=1G

BC848A=1J; BC848B=1K; BC848C=1L



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## ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage BC846 BC847 BC848	V(BR)CBO	IC= 10μA, IE=0	<b>80</b> <b>50</b> <b>30</b>			V
Collector-emitter breakdown voltage BC846 BC847 BC848	V(BR)CEO	IC= 10mA, IB=0	<b>65</b> <b>45</b> <b>30</b>			V
Emitter-base breakdown voltage	V(BR)EBO	IE=10μA, IC=0	6			V
Collector cut-off current BC846 BC847 BC848	ICBO	VCB=70 V , IE=0 VCB=50 V , IE=0 VCB=30 V , IE=0			0.01	μA
Emitter cut-off current	IEBO	VEB= 5V , IC=0			0.1	μA
DC current gain BC846A; 847A; 848A BC846B; 847B; 848B BC847C; BC848C	hFE	VCE=5V, IC= 2mA	110 200 420		220 450 800	
Collector-emitter saturation voltage	VCE(sat)	IC=100 mA, IB= 5mA			0.5	V
Base-emitter saturation voltage	VBE(sat)	IC=100 mA, IB= 5mA			1.1	V
Transition frequency	fT	VCE=5V, IC= 10mA f=100MHz	100			MHz
Collector Current Capacitance	Cob	VCE=10V, f=1MHz			4.5	pF

### CLASSIFICATION OF hFE

Rank	L	H	J
Range	120-200	200-350	300-400



TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

