



SOT-23 Plastic-Encapsulate Transistors

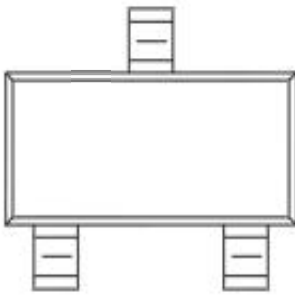
BC846

TRANSISTOR (NPN)

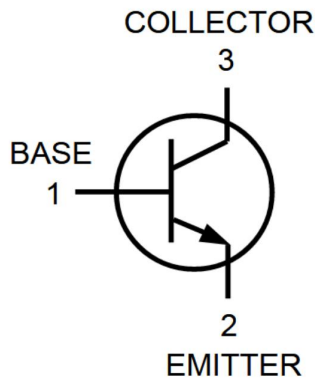
BC847

BC848

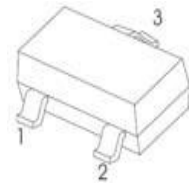
MARKING:



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°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	BC846 80	V
		BC847 50	
		BC848 30	
Collector-Emitter Voltage	VCEO	BC846 65	V
		BC847 45	
		BC848 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	°C/W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

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

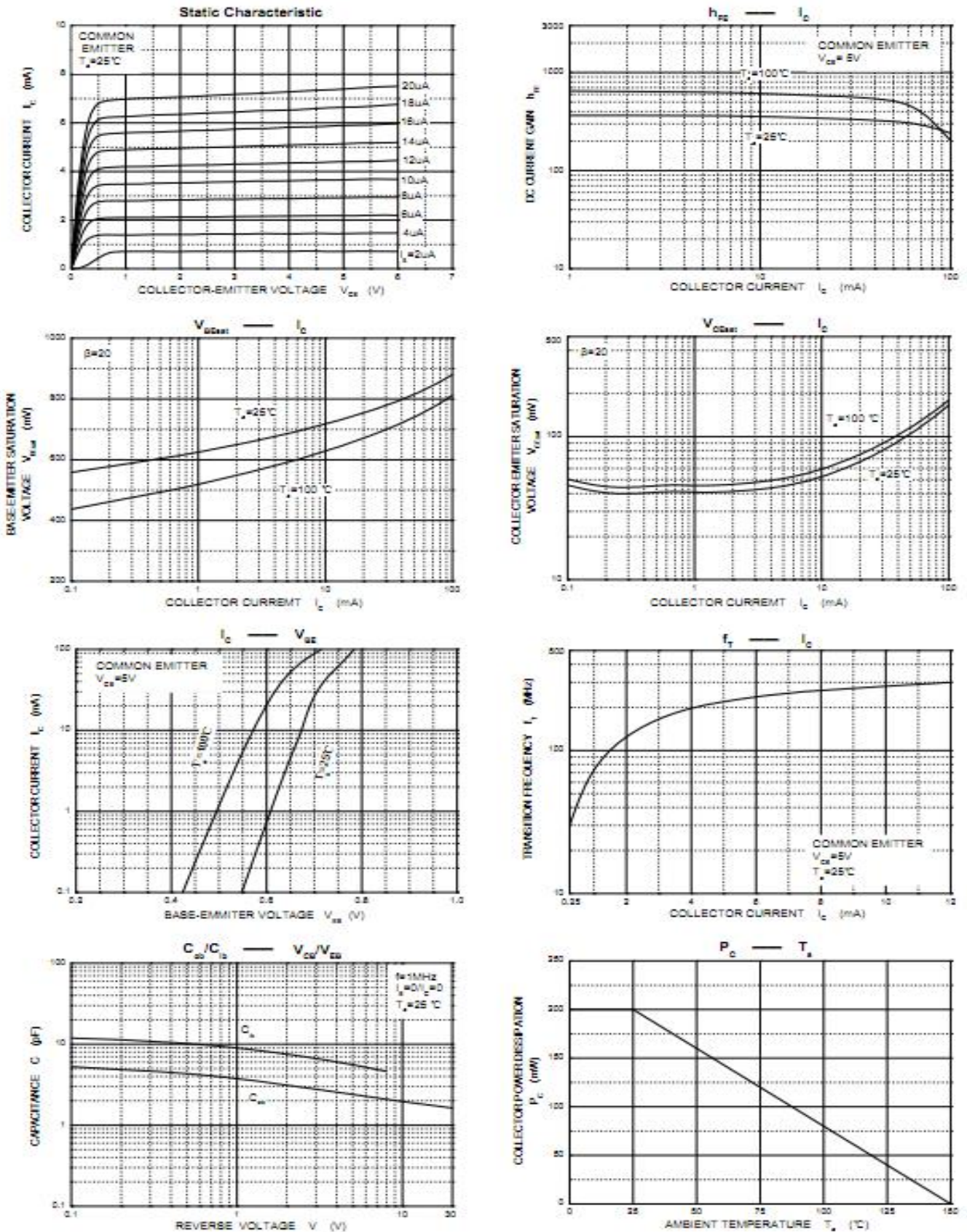


ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage BC846 BC847 BC848	V(BR)CBO	IC= 10μA, IE=0	80 50 30			V
Collector-emitter breakdown voltage BC846 BC847 BC848	V(BR)CEO	IC= 10mA, IB=0	65 45 30			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

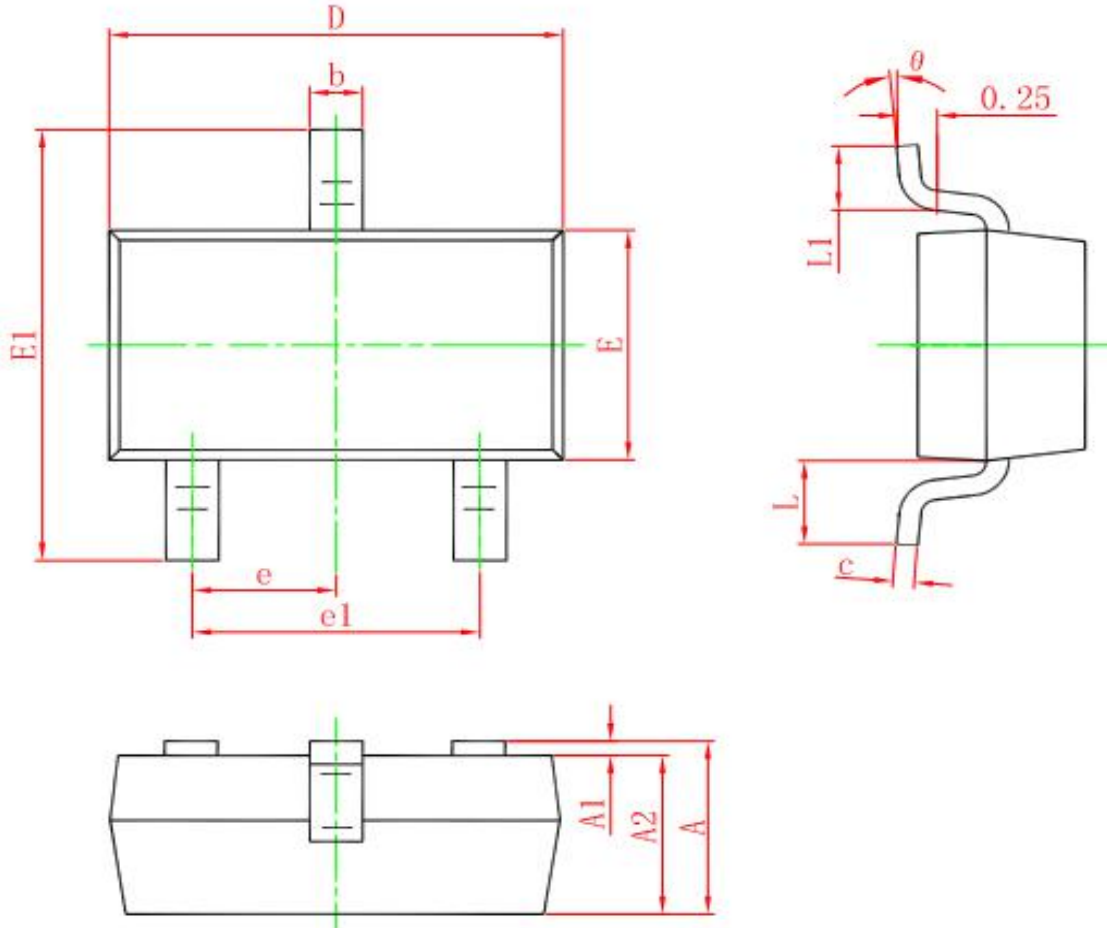


TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS





SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In 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
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°