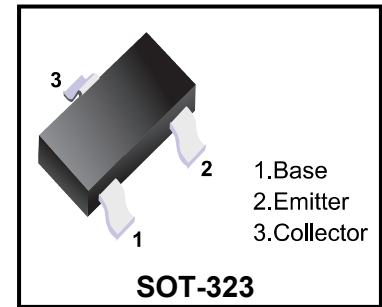


Plastic-Encapsulate Transistors

TRANSISTOR(NPN)

Features

- ◆Complementary to BC856W/BC857W/BC858W
- ◆Power Dissipation of 150mW
- ◆Ideally suited for automatic insertion
- ◆For switching and AF amplifier applications



Mechanical Data

- ◆Small Outline Plastic Package
- ◆Epoxy UL: 94V-0
- ◆Mounting Position: Any

Marking:

BC846AW=1A	BC846BW=1B	
BC847AW=1E	BC847BW=1F	BC847CW=1G
BC848AW=1J	BC848BW=1K	BC848CW=1L

Maximum Ratings & Thermal Characteristics

(Rat ings at 25°C ambient temperature unless otherwise specified.)

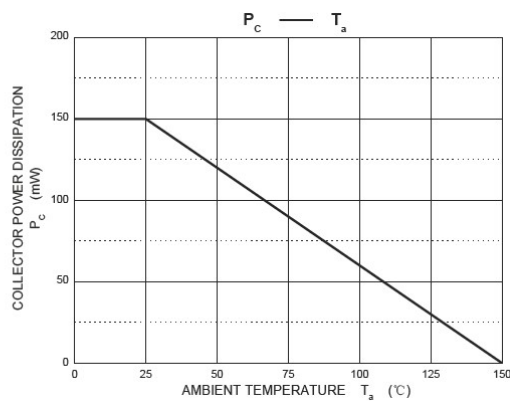
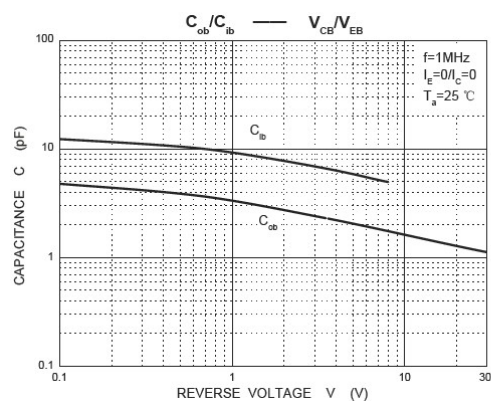
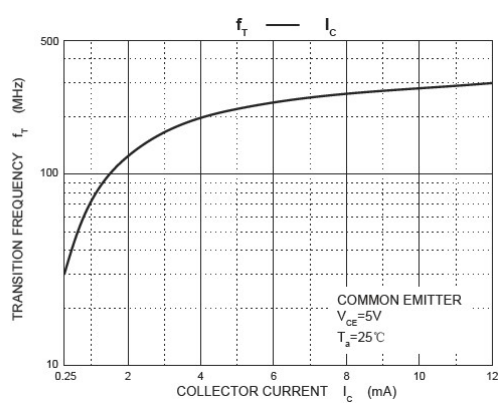
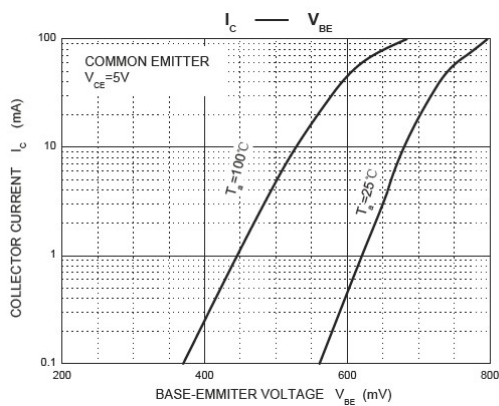
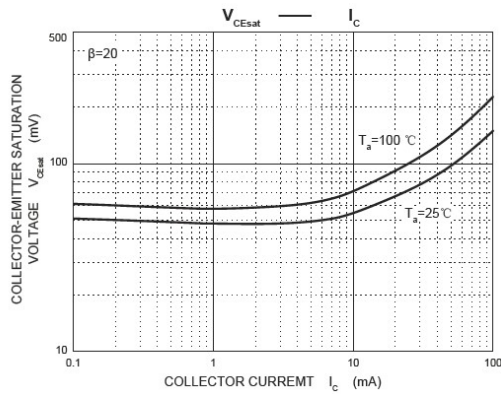
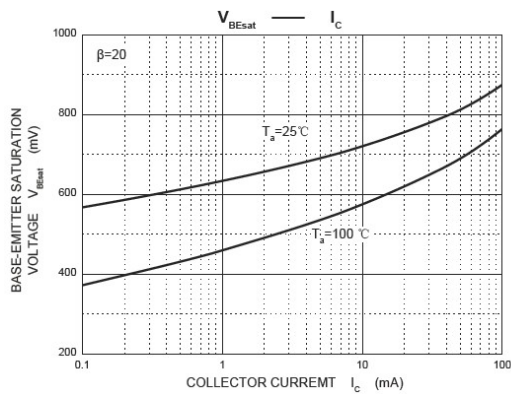
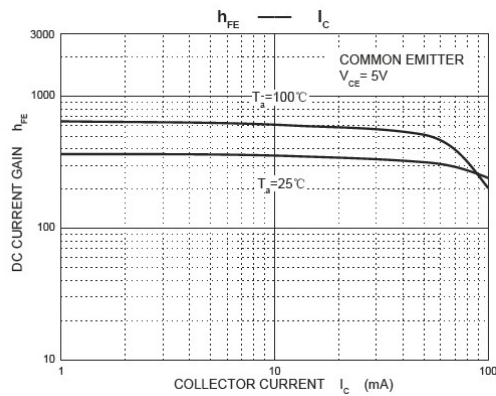
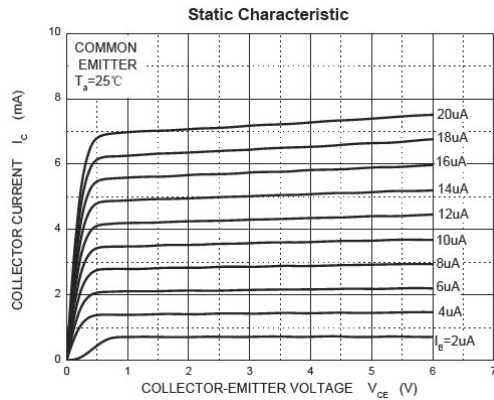
Parameters	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	BC846W 80	V
		BC847W 50	
		BC848W 30	
Collector-Emitter Voltage	V_{CEO}	BC846W 65	V
		BC847W 45	
		BC848W 30	
Emitter -Base Voltage	V_{EBO}	BC846W 6	V
		BC847W 6	
		BC848W 5	
Collector Current-Continuous	I_c	100	mA
Collector Power Dissipation	P_c	150	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55-+150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$	833	°C/W

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Symbols	Test Condition	Limits		Units
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	BC846W $I_C=10\mu A, I_E=0$	80		V
		BC847W	50		
		BC848W	30		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	BC846W $I_C=10mA, I_B=0$	65		V
		BC847W	45		
		BC848W	30		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	BC846W $I_E=1\mu A, I_C=0$	6		V
		BC847W	6		
		BC848W	5		
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$		15	nA
DC current gain	h_{FE}	BC846AW;BC847AW;BC848AW $V_{CE}=5V, I_C=2mA$	110	220	
		BC846BW;BC847BW;BC848BW	200	450	
		BC847CW;BC848CW	420	800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5mA$		0.25 0.60	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
Noise figure	NF	$V_{CE}=5V, I_C=0.2mA,$ BC846AW;BC847AW;BC848AW $f=1MHz, R_s=2K\Omega$		10	dB
		BC846BW;BC847BW;BC848BW		10	
		BC847CW;BC848CW $BW=200HZ$		4	

Typical Characteristics



Ordering information

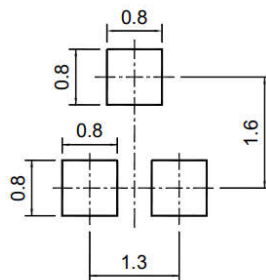
Package	Packing Description	Base Quantity	Packing Quantity
SOT-323	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-323

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
A1	0.1		4	
bp	0.3	0.4	12	16
C	0.10	0.25	4	10
D	1.8	2.2	71	87
E	1.15	1.35	45	53
E	1.3		51	
E1	0.65		26	
HE	2.0	2.2	79	87
Lp	0.15	0.45	6	18
Q	0.13	0.23	5.1	9
v	0.2		8	
W	0.2		8	

The recommended mounting pad size



Disclaimer

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