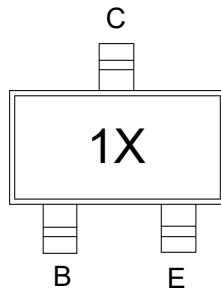


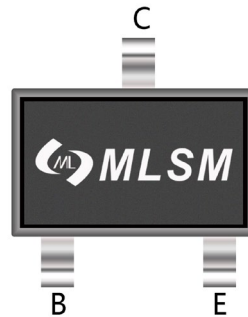
Features

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

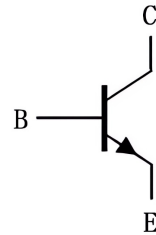


Marking and pin assignment

X:Rank



SOT-23 top view



Schematic diagram



Pb-Free



Halogen-Free

Maximum Ratings (Ta=25°C unless otherwise noted)

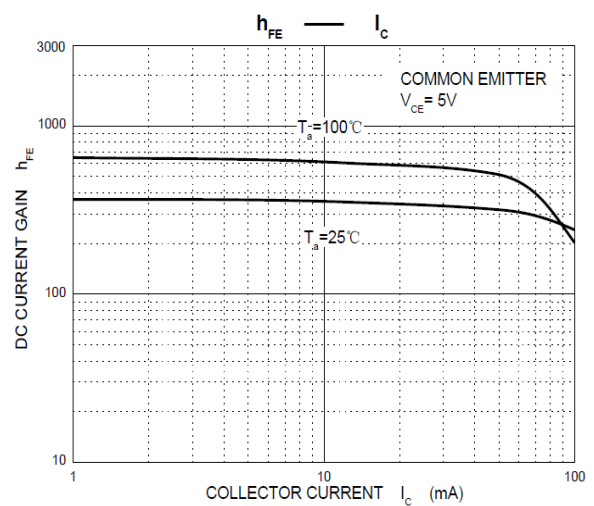
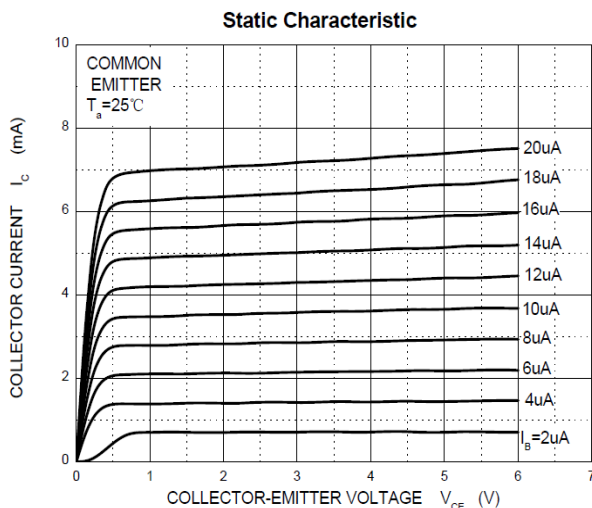
Symbol	Parameter	BC846W	BC847W	BC848W	Unit
V_{CBO}	Collector-Base Voltage	80	50	30	V
V_{CEO}	Collector-Emitter Voltage	65	45	30	V
V_{EBO}	Emitter-Base Voltage	6	6	5	V
I_C	Collector Current	0.1			A
P_C	Collector Power Dissipation	150			mW
833	Thermal Resistance From Junction To Ambient	833			°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150			°C

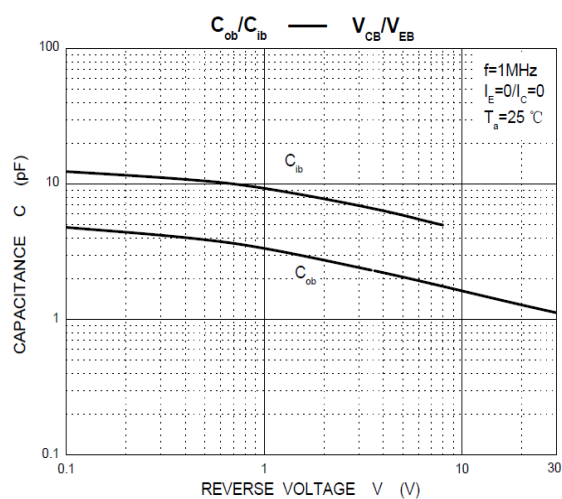
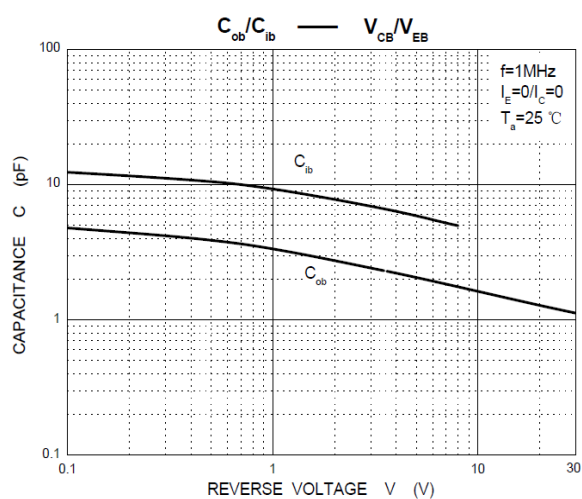
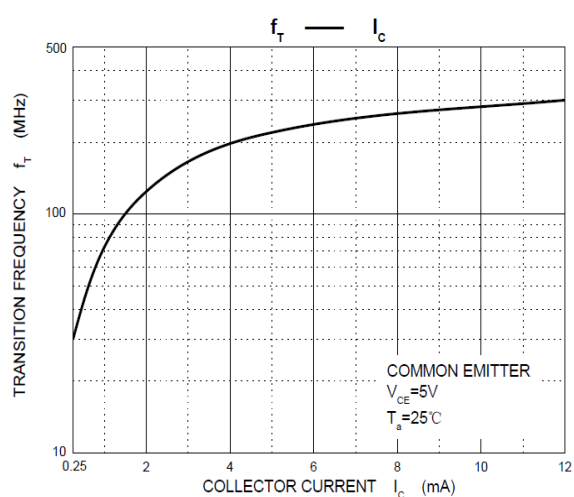
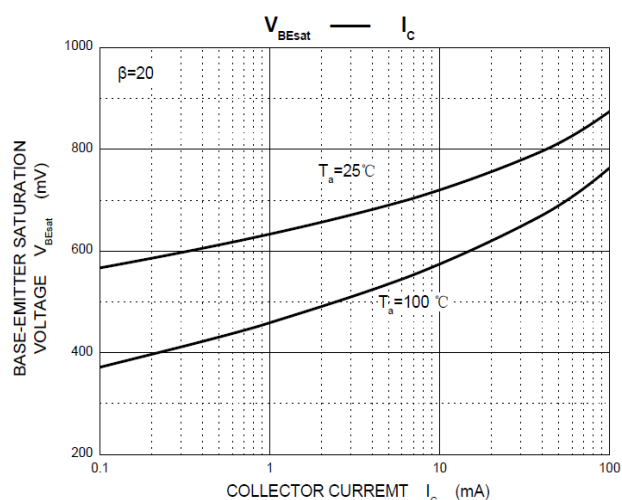
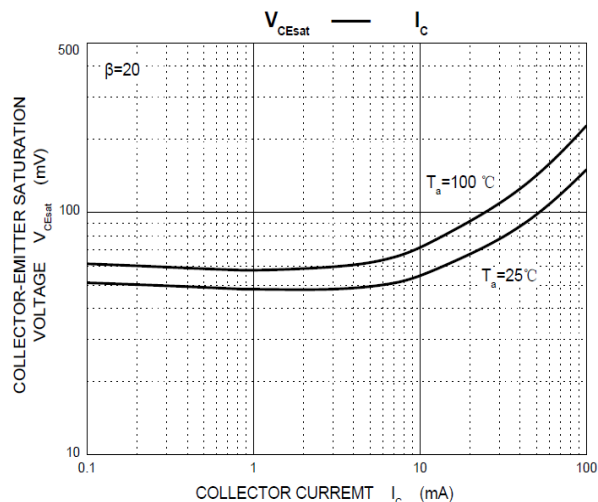
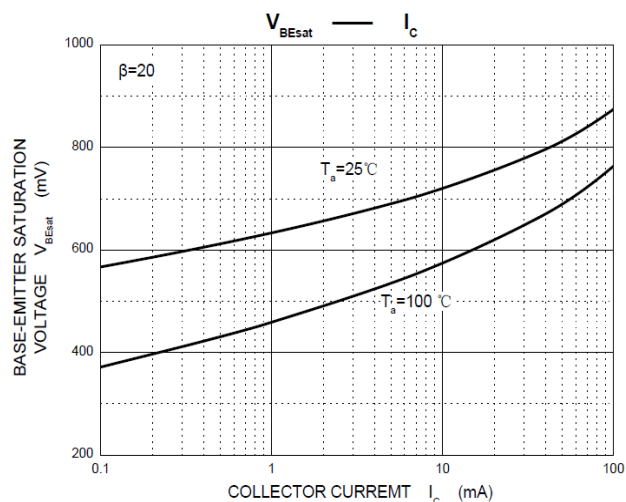
Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BC846AW	SOT-323	1A	3,000	45,000	180,000	7"reel
BC846BW	SOT-323	1B	3,000	45,000	180,000	7"reel
BC847AW	SOT-323	1E	3,000	45,000	180,000	7"reel
BC847BW	SOT-323	1F	3,000	45,000	180,000	7"reel
BC847CW	SOT-323	1G	3,000	45,000	180,000	7"reel
BC848AW	SOT-323	1J	3,000	45,000	180,000	7"reel
BC848BW	SOT-323	1K	3,000	45,000	180,000	7"reel
BC848CW	SOT-323	1L	3,000	45,000	180,000	7"reel

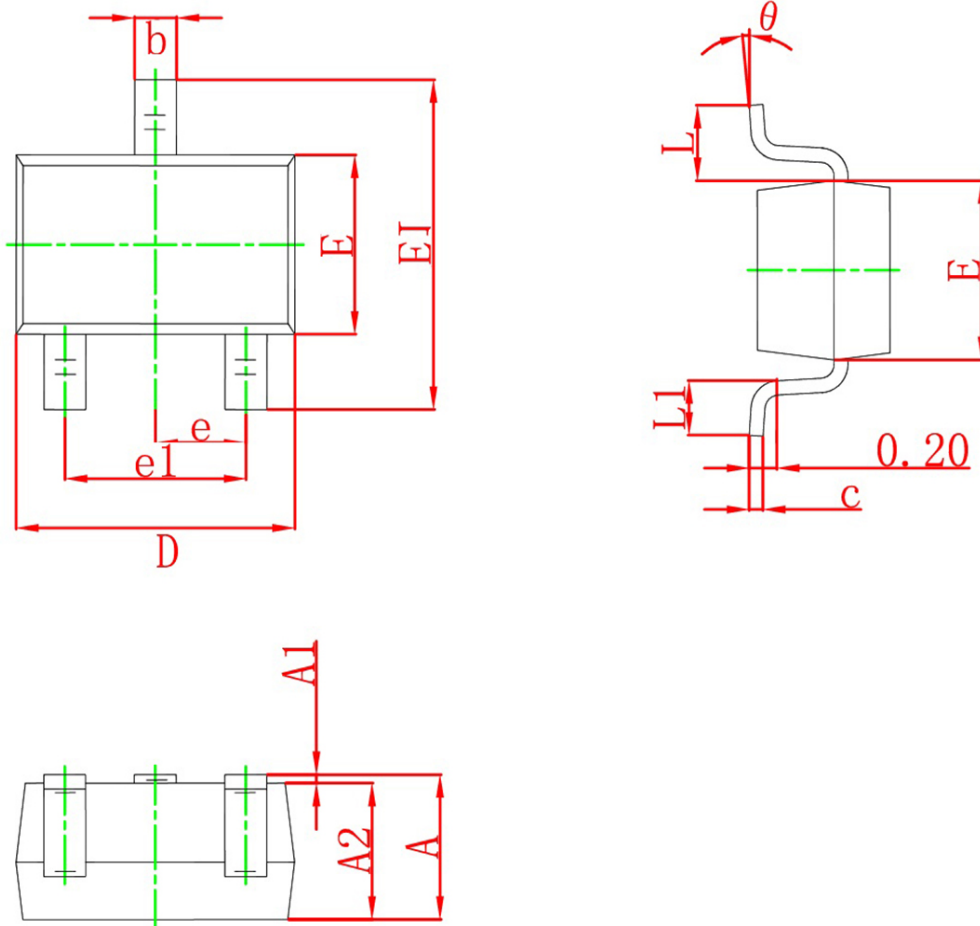
Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter		Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	BC846W	$I_C=10\mu A, I_E=0$	80	--	--	V
		BC847W		50	--	--	
		BC848W		30	--	--	
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	BC846W	$I_C=10mA, I_B=0$	65	--	--	V
		BC847W		45	--	--	
		BC848W		30	--	--	
$V_{(BR)EBO}$	Emitter-base breakdown voltage	BC846W	$I_E=1\mu A, I_C=0$	6	--	--	V
		BC847W		6	--	--	
		BC848W		5	--	--	
I_{CBO}	Collector cut-off current		$V_{CB}=30V$	--	--	15	nA
H_{FE}	DC current gain	BC846AW,847AW,848AW	$V_{CE}=5V, I_C=10mA$	--	90	--	
		BC846BW,847BW,848BW		--	150	--	
		BC847CW,BC848CW		--	270	--	
		BC846AW,847AW,848AW	$V_{CE}=5V, I_C=2mA$	110	--	220	
		BC846BW,847BW,848BW		200	--	450	
		BC847CW,BC848CW		420	--	800	
$V_{CE(sat)}$	Collector-emitter saturation voltage		$I_C=10mA, I_B=0.5mA$	--	--	0.25	V
			$I_C=100mA, I_B=5mA$	--	--	0.6	
$V_{BE(on)}$	Base-emitter voltage		$V_{CE}=5V, I_C=2mA$	580	660	700	mV
			$V_{CE}=5V, I_C=10mA$	--	--	770	
$V_{BE(sat)}$	Base-emitter saturation voltage		$I_C=10mA, I_B=0.5mA$	--	0.7	--	V
			$I_C=100mA, I_B=5mA$	--	0.9	--	
f_T	Transition frequency		$V_{CE}=5V, I_C=10mA, f=100MHz$	100	--		MHz
C_{ob}	Collector output capacitance		$V_{CB}=10V, f=1MHz$	--	--	4.5	pF
NF	Noise figure	BC846AW,847AW,848AW	$V_{CE}=5V, I_C=0.2mA, f=1KHz$ Ω RS=2K , BW=200Hz	--	--	10	dB
		BC846BW,847BW,848BW		--	--	10	
		BC847CW,BC848CW		--	--	4	

Typical Operating Characteristics




SOT-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°