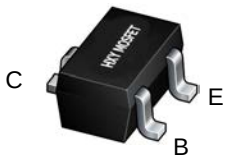
SBC847AWT1G

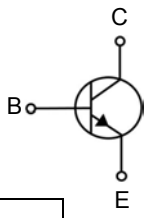
NPN Plastic-Encapsulate Transistors

Features

- Collector Current Capability I_C=0.2A
- Collector Emitter Voltage V_{CEO}=40V



SOT-323



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
SBC847AWT1G	SOT-323	1F	3000

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

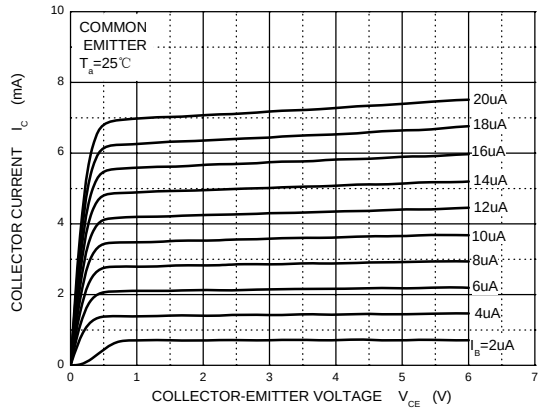
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current –Continuous	0.1	A
P_C	Collector Power Dissipation	150	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	833	°C/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55-150	°C

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

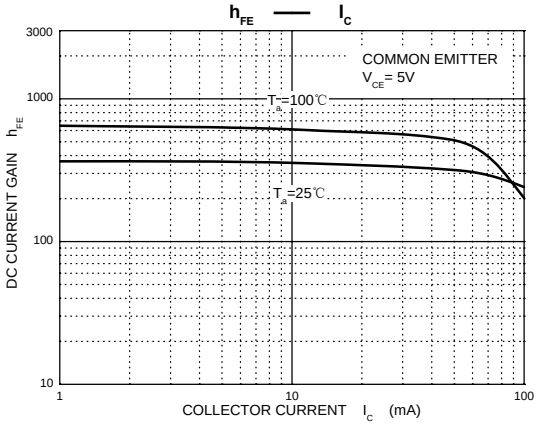
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C= 10μA, I_E=0	50			V
Collector-emitter breakdown voltage	V_{CEO}	I_C= 10mA, I_B=0	45			V
Emitter-base breakdown voltage	V_{EBO}	I_E= 1 μA, I_C=0	6			V
Collector Cutoff Current	I_{CBO}	V_{CB}=30V			15	nA
DC current gain	h_{FE}	V_{CE}= 5V, I_C= 10μA V_{CE}= 5V, I_C= 2mA	 200	150	 450	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA, I_B=0. 5mA I_C=100mA, I_B= 5mA			0.25 0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10mA, I_B=0. 5mA I_C=100mA, I_B= 5mA		0.7 0.9		V
Base-emitter voltage	$V_{BE(on)}$	V_{CE}= 5V, I_C= 2mA V_{CE}= 5V, I_C= 10mA	580	660	700 770	mV
Transition frequency	f_T	V_{CE}= 5 V, 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, f=1KHz,R_S=2KΩ BW=200Hz			10	dB

Typical Characteristics

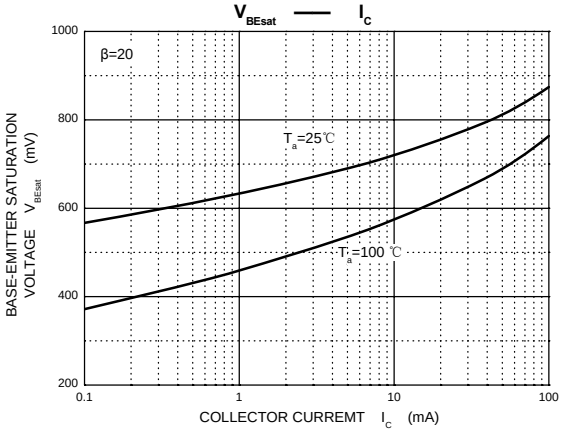
Static Characteristic



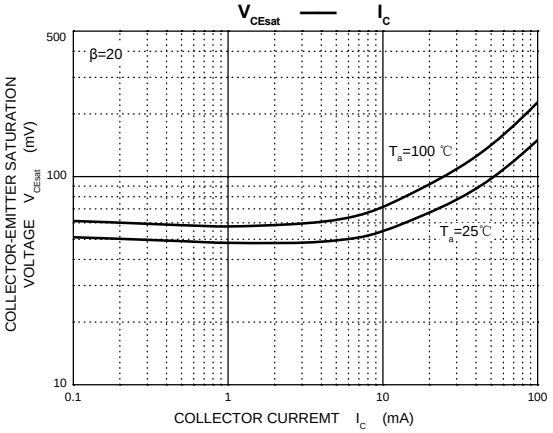
hFE — IC



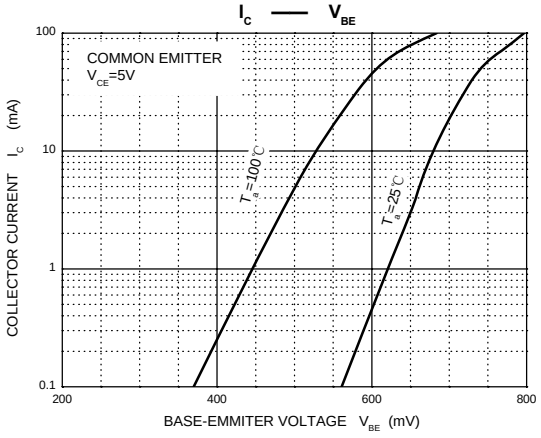
VBEsat — IC



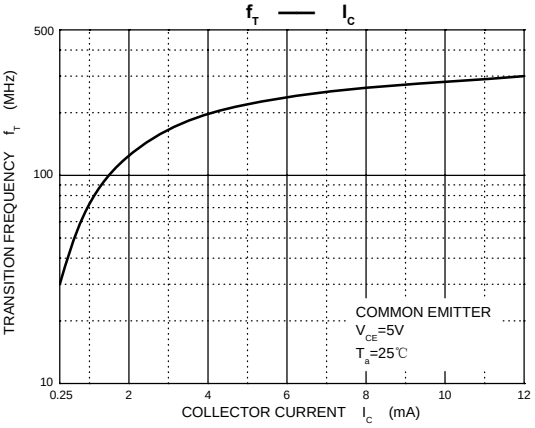
VCEsat — IC



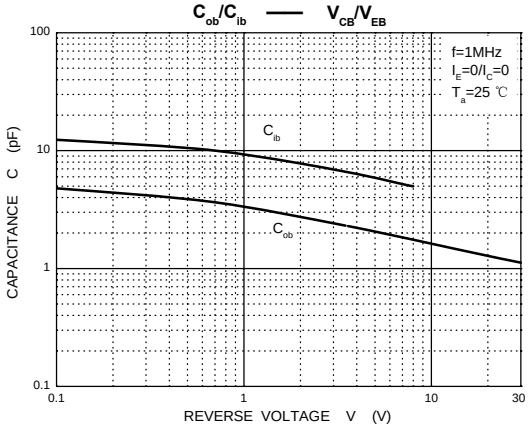
IC — VBE



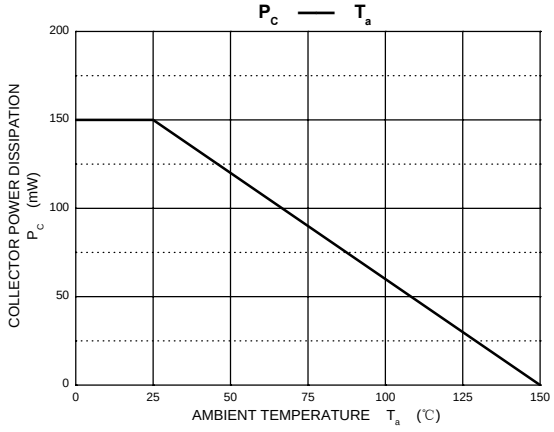
fT — IC



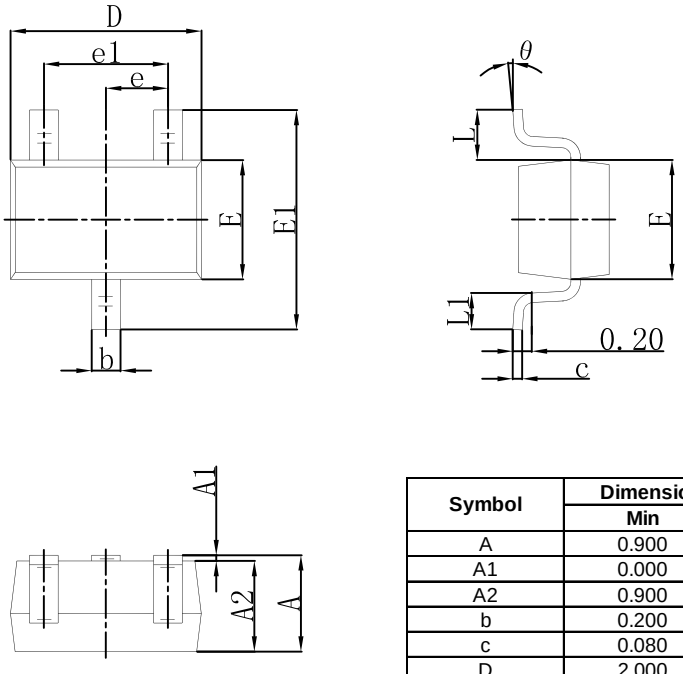
Cob/Cib — VCB/VEB



PC — Ta

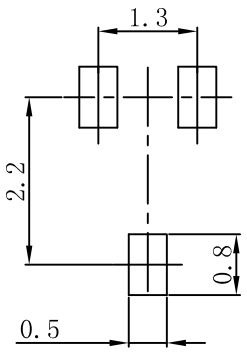


SOT-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		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	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-323 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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