



Features

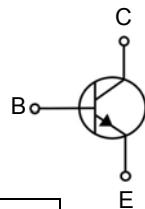
- Collector Current Capability $I_C=0.2A$
- Collector Emitter Voltage $V_{CEO}=40V$



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
AC847BWQ-7	SOT-323	1F	3000

SOT-323



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

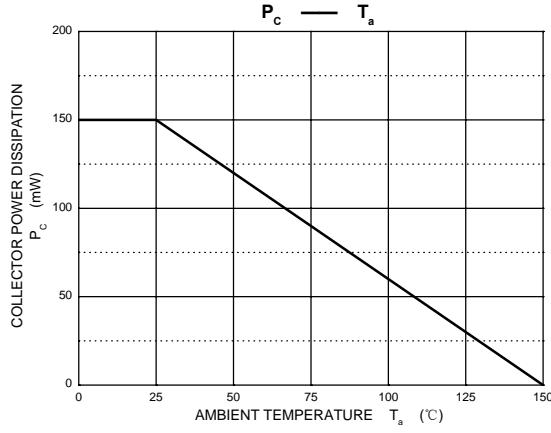
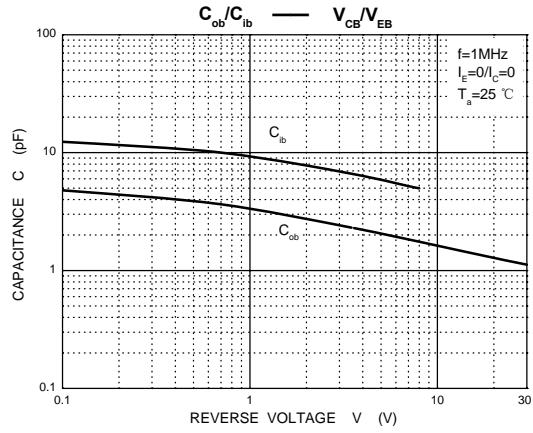
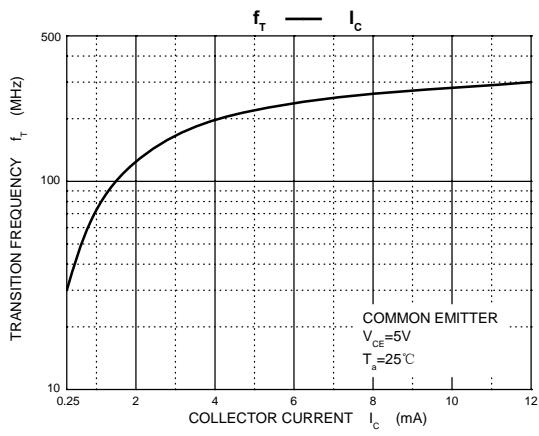
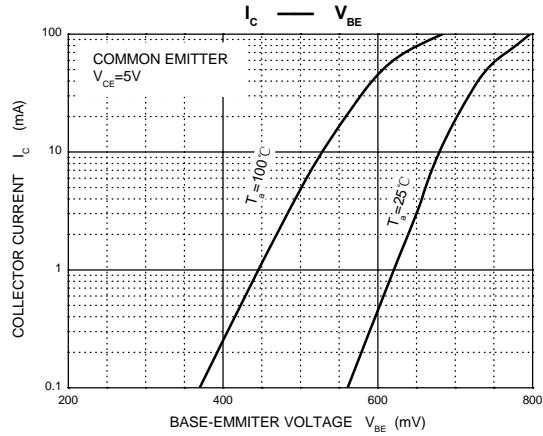
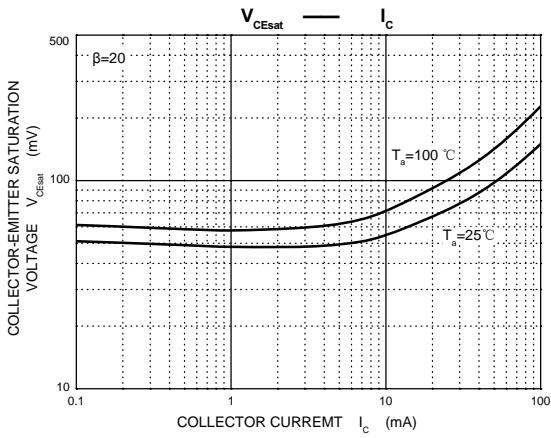
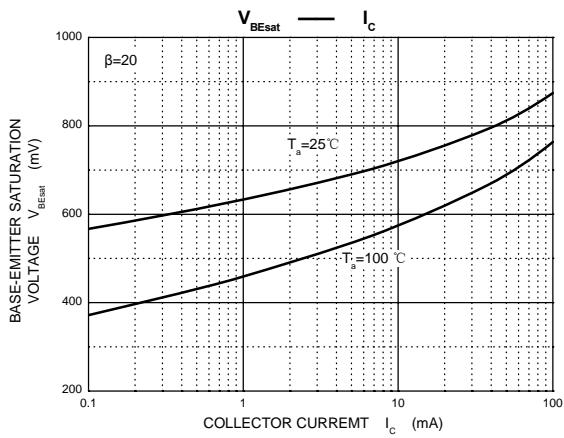
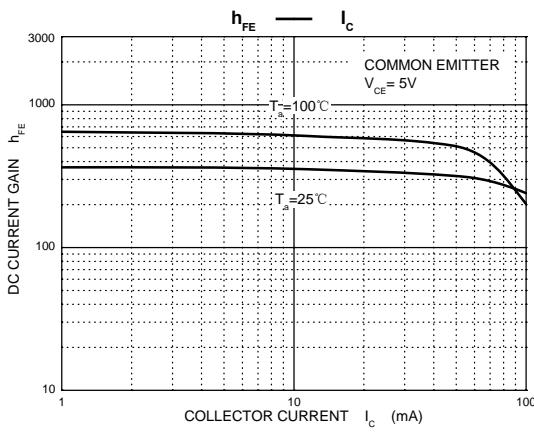
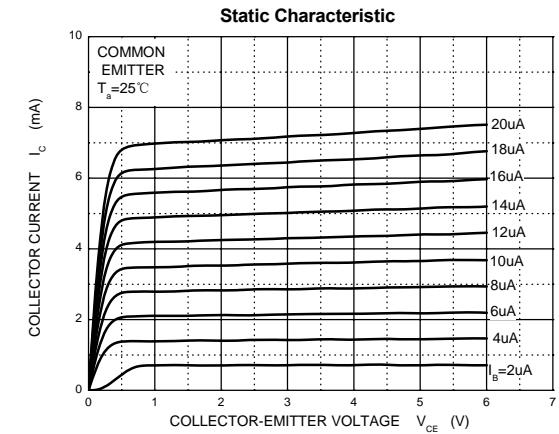
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current –Continuous	0.1	A
P_C	Collector Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	833	°C/W
T_J, T_{stg}	Operation 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}	$I_C= 10\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C= 10mA, I_B=0$	45			V
Emitter-base breakdown voltage	V_{EBO}	$I_E= 1 \mu A, I_C=0$	6			V
Collector Cutoff Current	I_{CBO}	$V_{CB}=30V$			15	nA
DC current gain	h_{FE}	$V_{CE}= 5V, I_C= 10\mu A$ $V_{CE}= 5V, I_C= 2mA$	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	$V_{CE}=5V, I_C=0.2mA$, $f=1KHz, R_S=2K\Omega$ $BW=200Hz$			10	dB

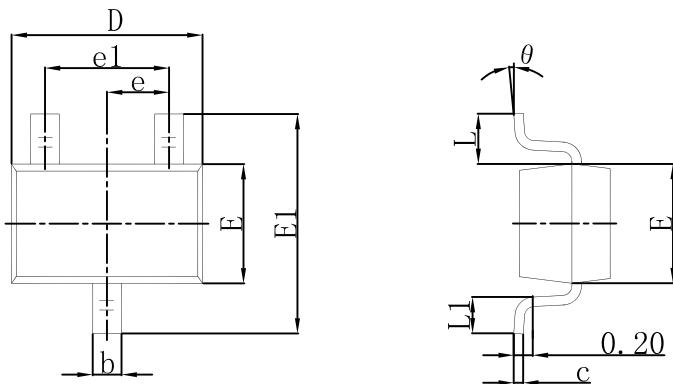


Typical Characteristics



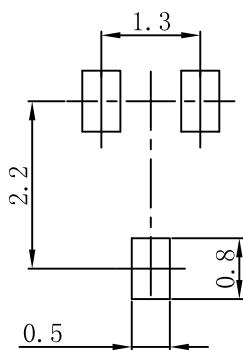


SOT-323 Package Outline Dimensions



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
theta	0°	8°	0°	8°

SOT-323 Suggested Pad Layout



Note:

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



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