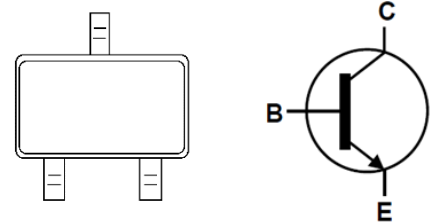


FEATURES AND BENEFITS

Product Summary		
I_C	100mA	@25 °C
BV_{CBO}	80V	@ $I_C=10\mu A$
BV_{CEO}	65V	@ $I_C=10mA$
BV_{EBO}	6V	@ $I_E=1\mu A$

- For General Purpose NPN Amplifier
- Low Current Leakage
- RoHS Compliant / Green EMC UL Flammability Classification Rating 94V-0
- Matte Tin (Sn) Lead finish Solderable per MIL-STD-202, Method 208
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.006 grams (Approximate)

SOT-323



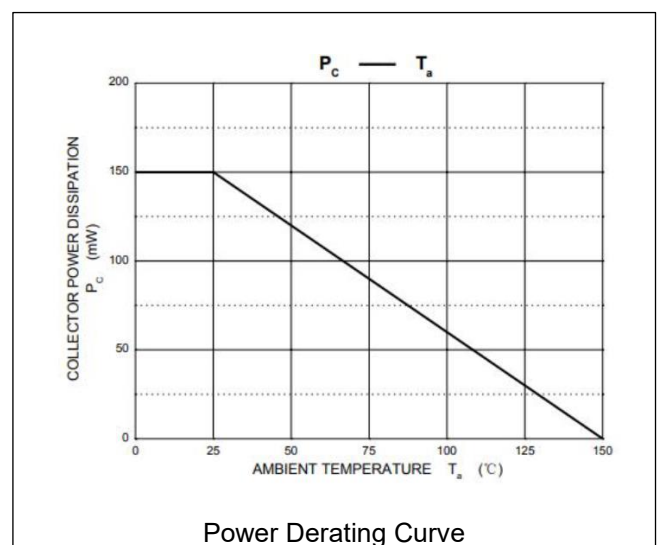
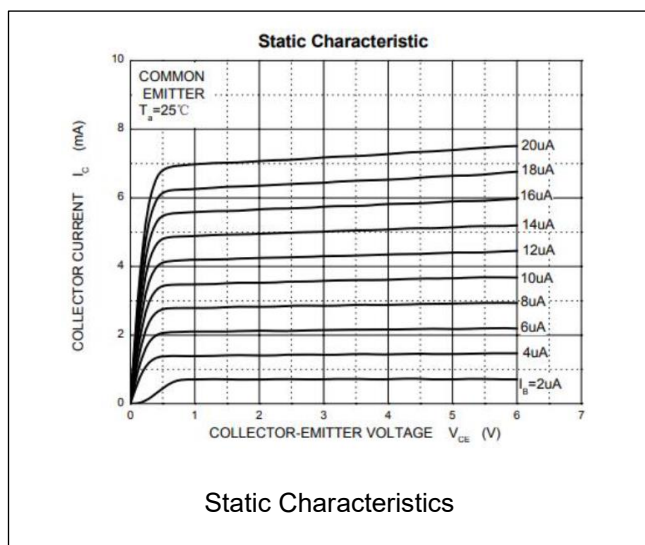
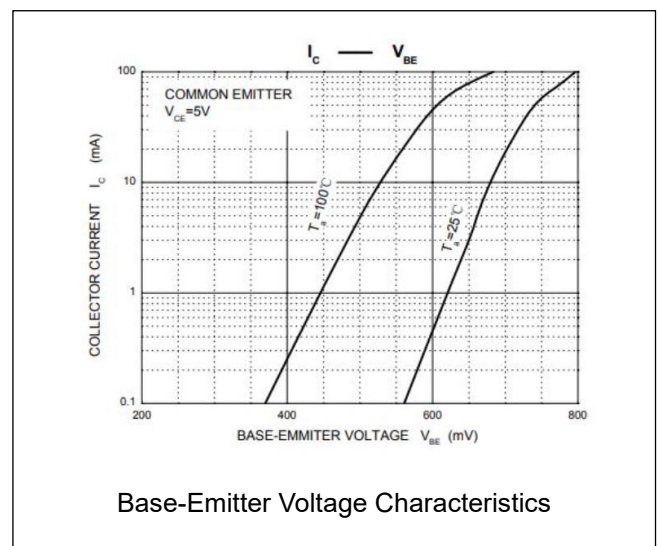
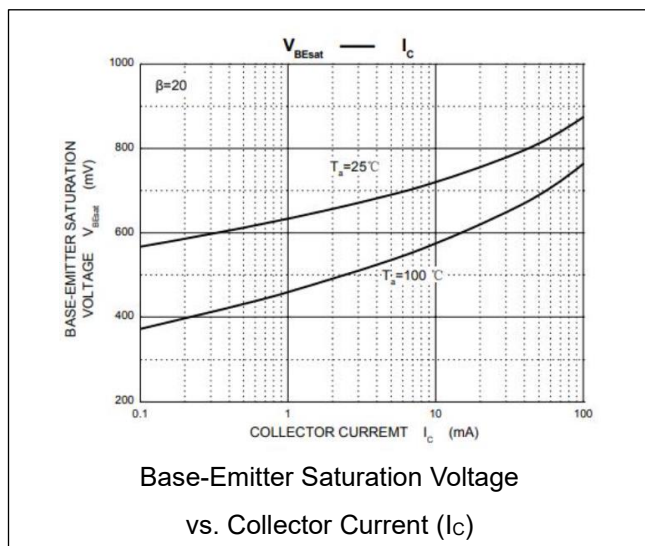
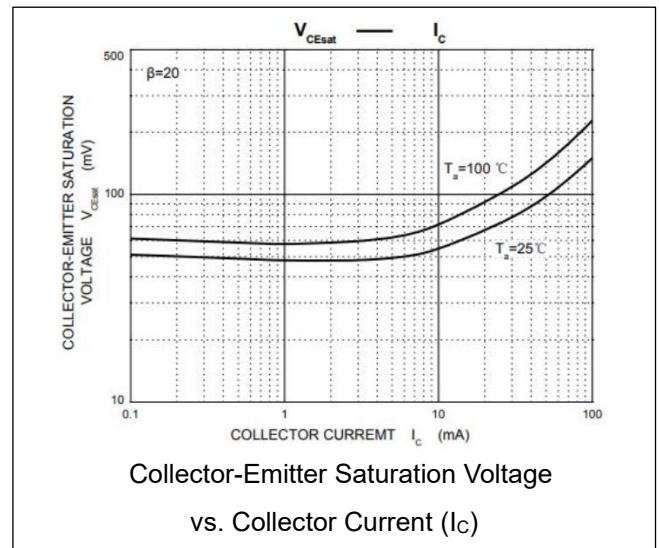
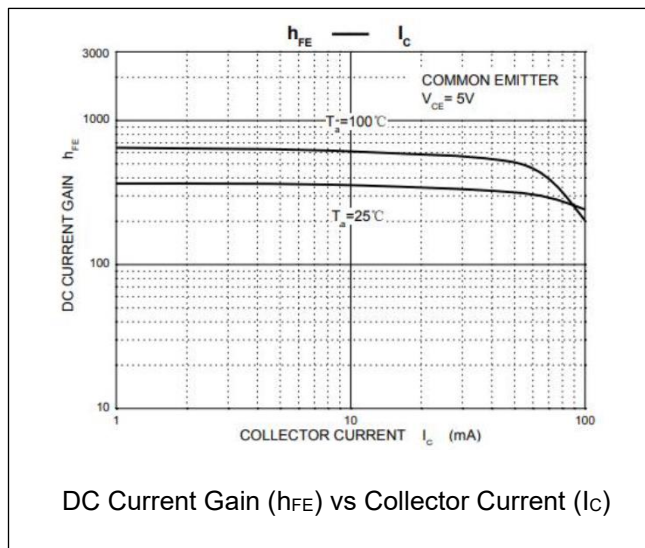
Maximum Ratings (TA = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	65	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	100	mA
Collector Power Dissipation	P_T	150	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

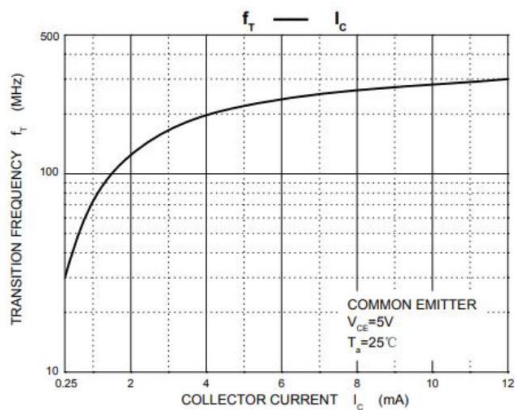
THERMAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Thermal Resistance from Junction to Ambient*	$R_{\theta JA}$	833	°C/W

* Device mounted on 1"x1" FR4 PCB

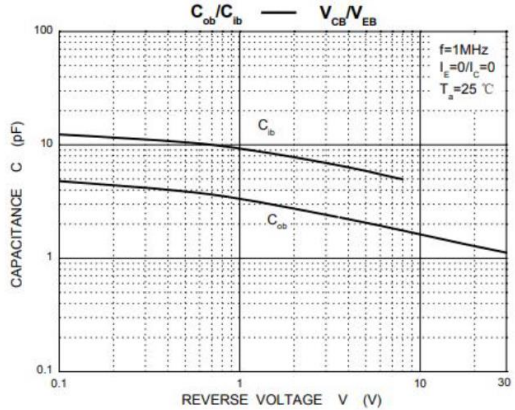
ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	CONDITION	MIN	MAX	UNIT
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	65		V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	80		V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\mu A, I_C = 0$	6		V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30V, I_E = 0$		15	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$		0.1	uA
DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 2mA$	420	800	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 0.5mA$		0.25	V
		$I_C = 100mA, I_B = 5mA$		0.60	
Base-Emitter Voltage	$V_{BE(on)}$	$V_{CE} = 5V, I_C = 2mA$	0.58	0.7	V
		$V_{CE} = 5V, I_C = 10mA$		0.77	
Transition Frequency	f_T	$V_{CE} = 5V, I_C = 10mA, f = 100MHz$	100		MHz
Output Capacitance	C_{obo}	$V_{CB} = 10V, f = 1MHz$		4.5	pF

RATING AND CHARACTERISTICS CURVES





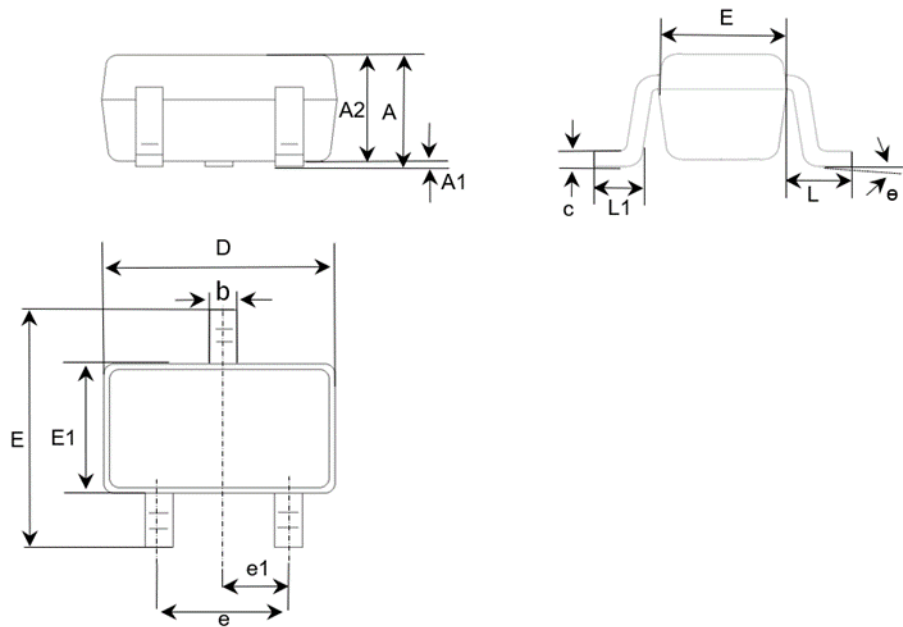
Transition Frequency (f_T) vs Collector Current (I_C)



Capacitance vs. Reverse Voltage

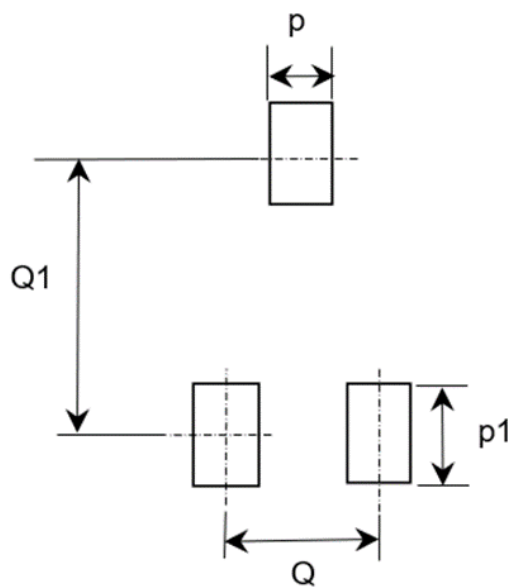
PACKAGE OUTLINE DIMENSIONS

SOT-323



Symbol	MIN	MAX
A	0.90	1.00
A1	0.00	0.10
A2	0.90	1.00
b	0.20	0.40
c	0.08	0.15
D	2.00	2.20
E	1.15	1.35
E1	2.15	2.45
e	0.65TYP	
e1	1.20	1.40
L	0.525REF	
L1	0.26	0.46
⊘	0°	8°
Unit: mm		

SUGGESTED PAD LAYOUT



Land Pattern Recommendation

Symbol	Type
Q1	2.2
Q	1.3
p	0.5
p1	0.8
Unit: mm	

DEVICE MARKING AND ORDERING INFORMATION

DEVICE	Marking	Quantity	Packing
BC846CW	1C	3000/7"Reel	Tape & Reel

NOTICE:

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