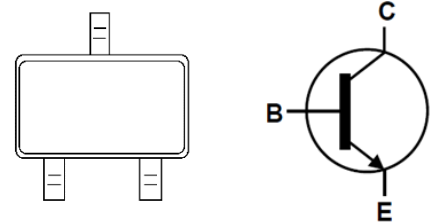


FEATURES AND BENEFITS

Product Summary		
I_C	500mA	@25 °C
BV_{CBO}	50V	@ $I_C=10\mu A$
BV_{CEO}	45V	@ $I_C=10mA$
BV_{EBO}	5V	@ $I_E=1\mu A$

- 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)

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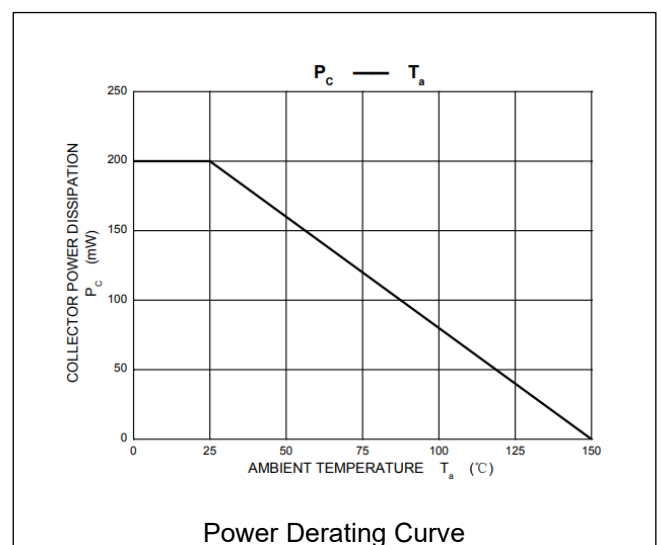
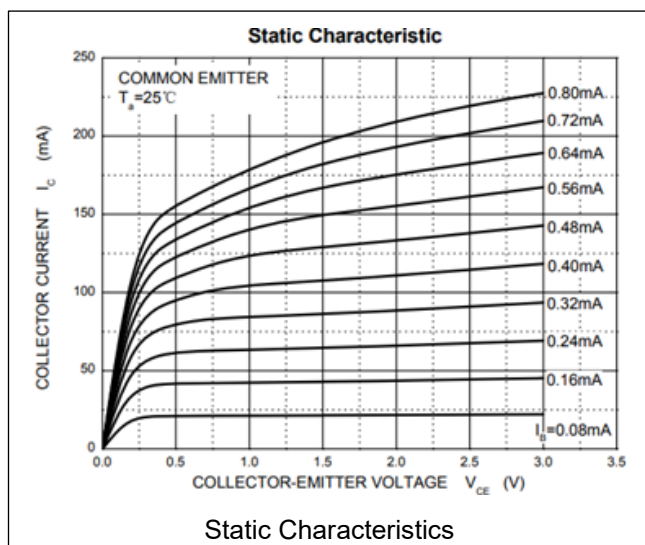
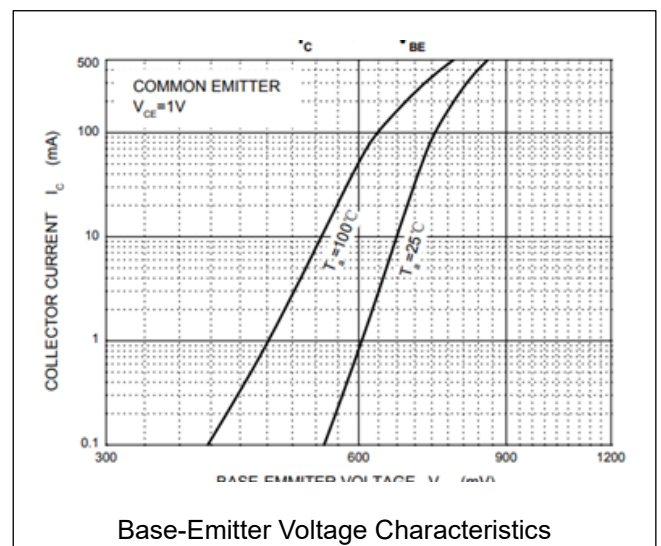
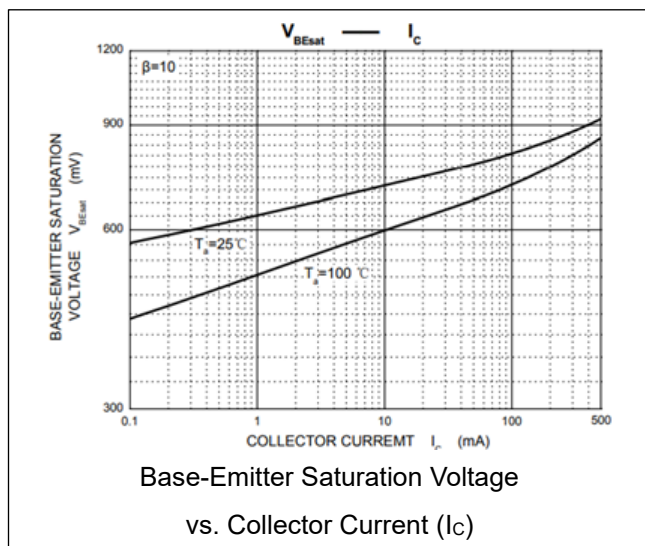
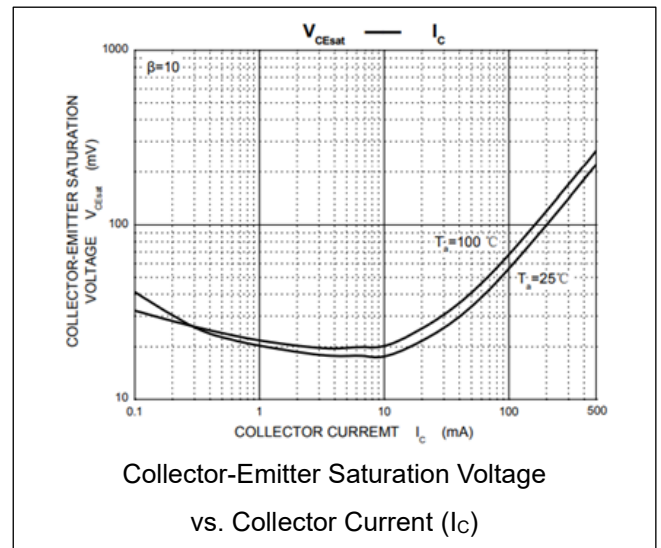
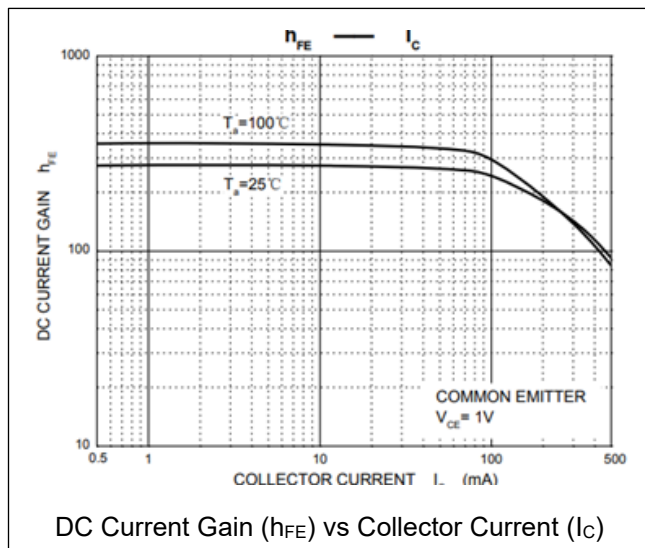
Maximum Ratings (TA = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Collector Power Dissipation	P_T	200	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

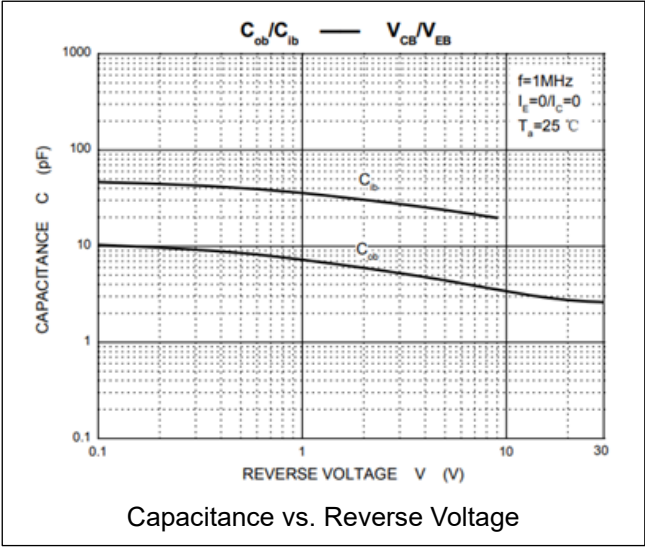
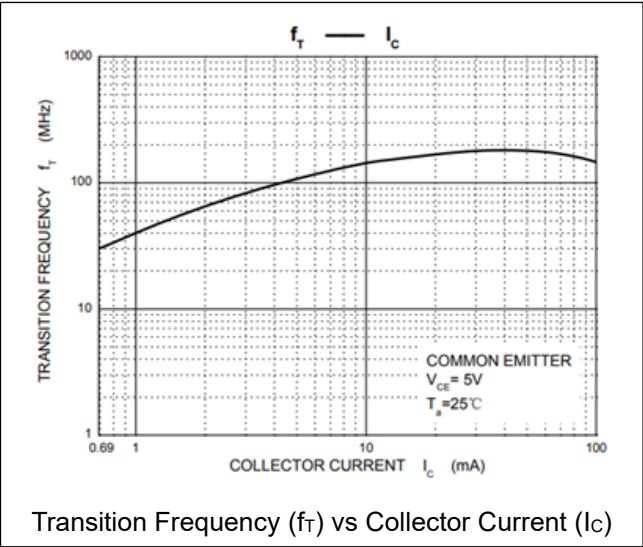
THERMAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Thermal Resistance from Junction to Ambient*	$R_{\theta JA}$	625	°C/W

* 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	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	45		V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	50		V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\mu A, I_C = 0$	5		V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 20V, I_E = 0$		0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$		0.1	μA
DC Current Gain	h_{FE}	$I_C = 100mA, V_{CE} = 1V$	100	250	
		$I_C = 500mA, V_{CE} = -V$	40		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$		1.2	V
Base-Emitter Voltage	$V_{BE(on)}$	$V_{CE} = 1V, I_C = 500mA$		1.2	V
Transition Frequency	f_T	$I_C = 10mA, V_{CE} = 5V, f = 100MHz$	100		MHz
Output Capacitance	C_{obo}	$V_{CB} = 10V, f = 1MHz$		10	pF

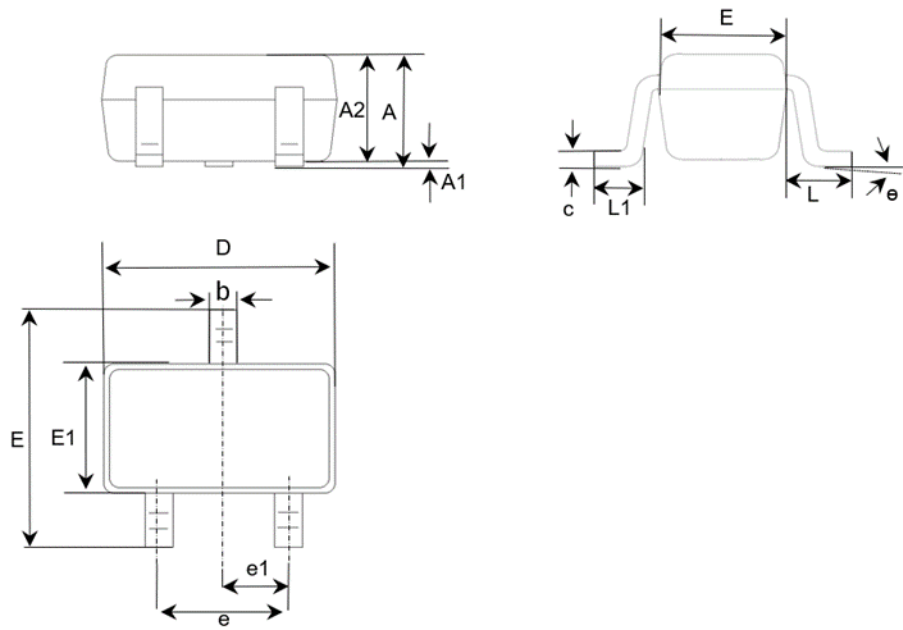
RATING AND CHARACTERISTICS CURVES





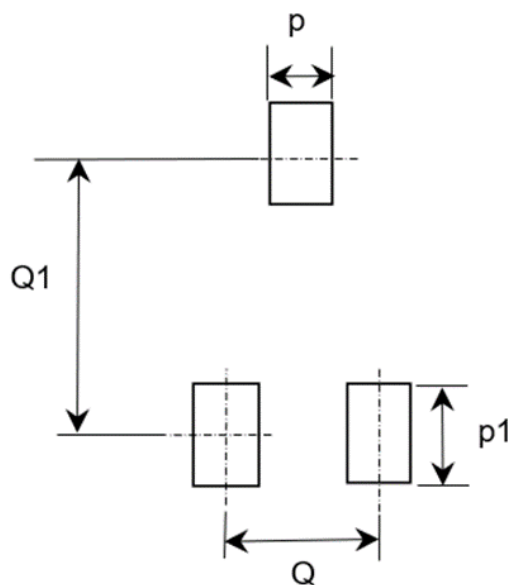
PACKAGE OUTLINE DIMENSIONS

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	2.15	2.45
E1	1.15	1.35
e	1.20	1.40
e1	0.65TYP	
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
BC817-16W	6A	3000/7"Reel	Tape & Reel

NOTICE:

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