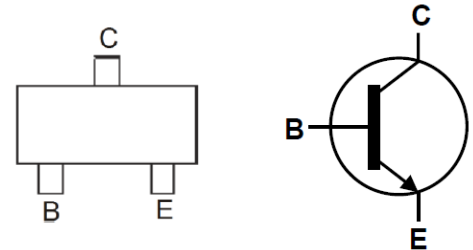


FEATURES AND BENEFITS

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
- 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: 0.008 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	300	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

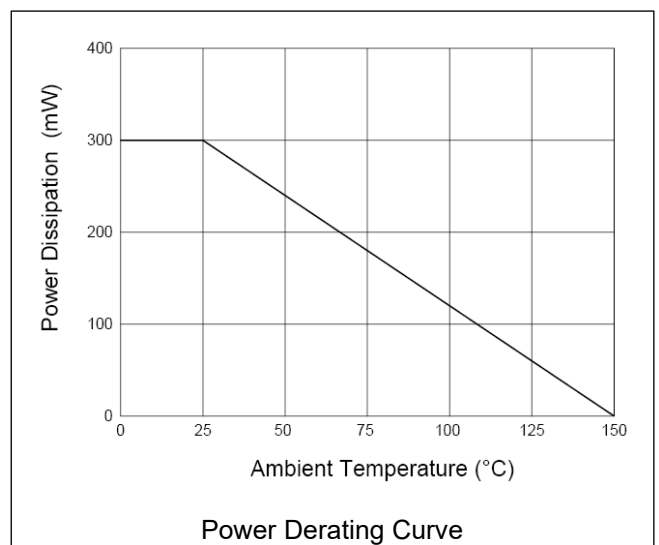
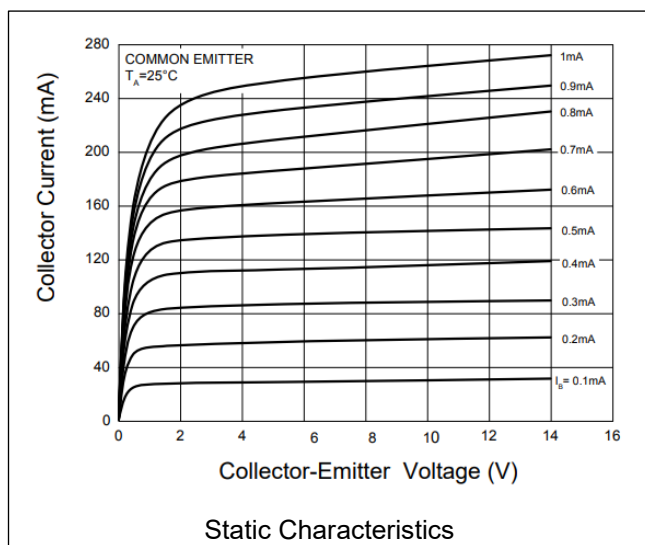
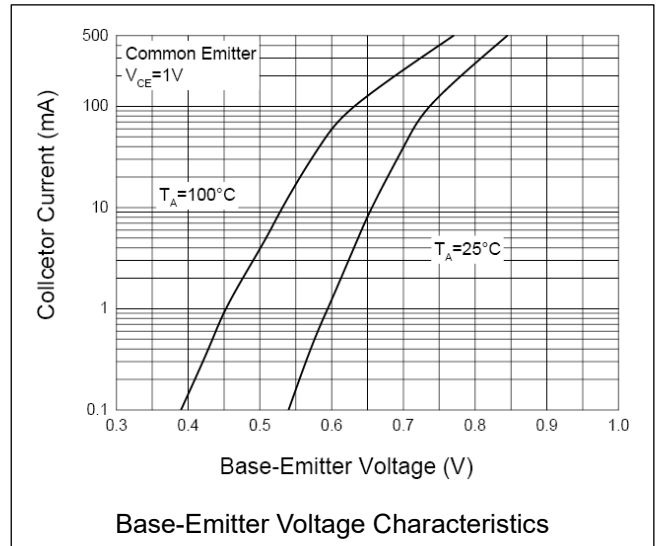
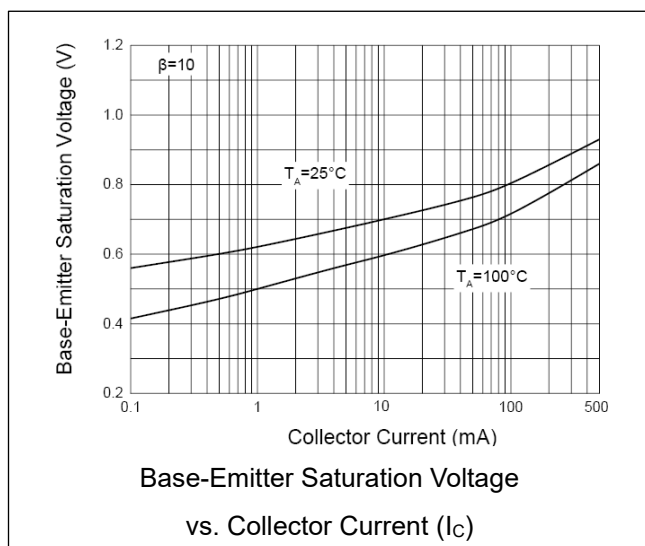
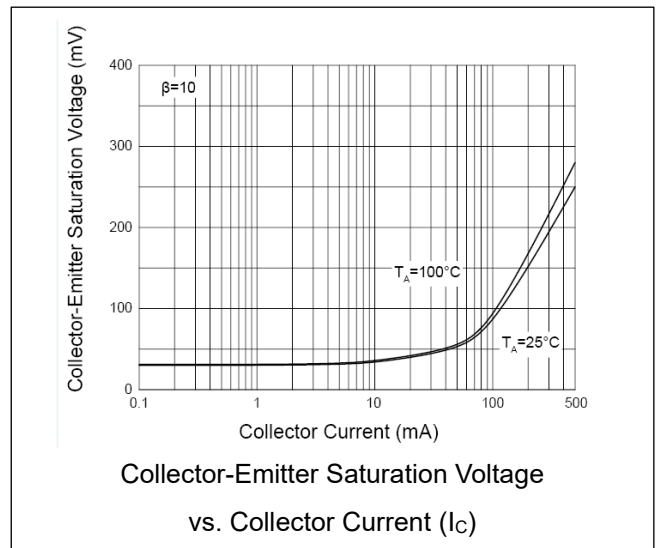
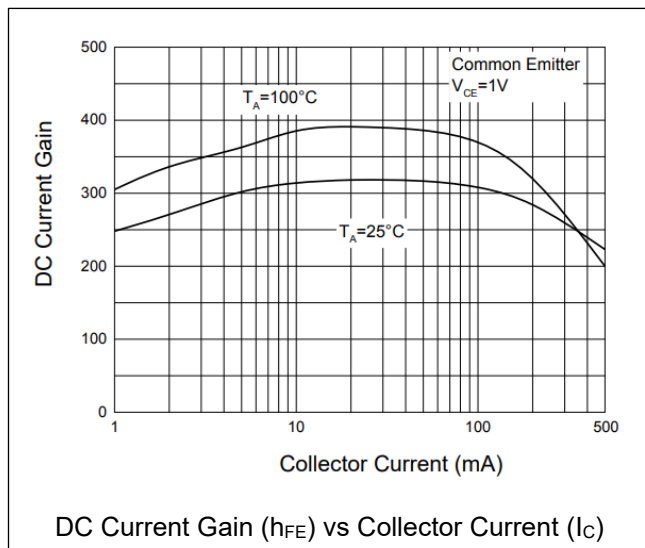
THERMAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Thermal Resistance from Junction to Ambient*	$R_{\theta JA}$	417	°C/W

* Device mounted on 1"x1" FR4 PCB

ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	CONDITION	MIN	TYP	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}	$V_{CB}=45V, I_E=0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			100	nA
DC Current Gain*	h_{FE}	$I_C=100mA, V_{CE}=1V$	250		600	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.7	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.2	V
Base-Emitter Voltage	V_{BE}	$I_C=500mA, V_{CE}=1V$			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

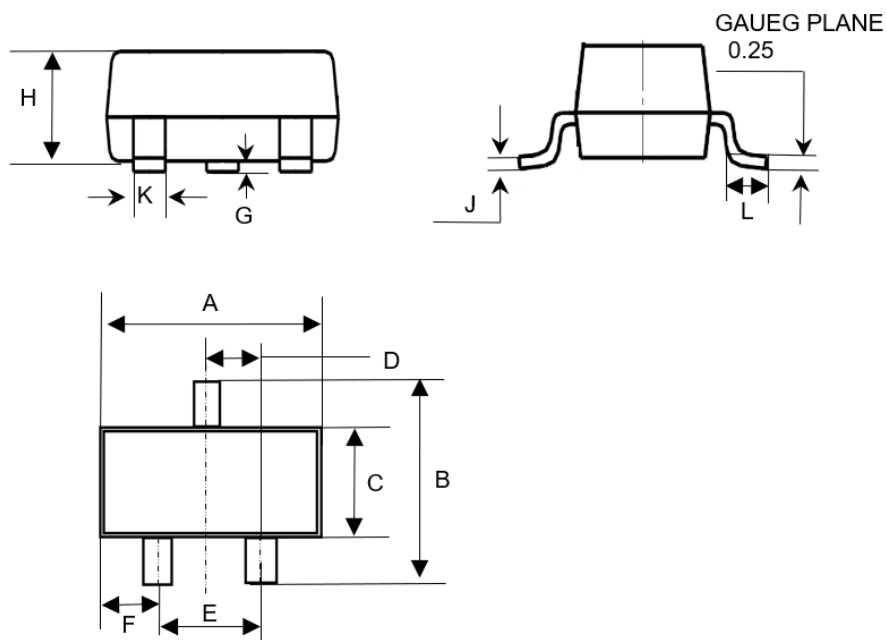
*Pulse Width $\leq 300\mu s$, Duty Cycles $\leq 2.0\%$

RATING AND CHARACTERISTICS CURVES



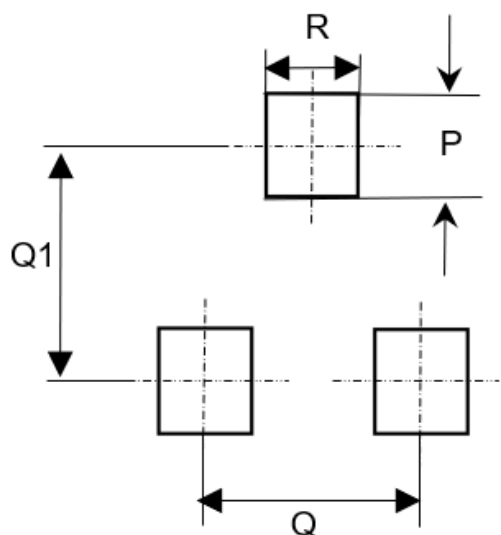
PACKAGE OUTLINE DIMENSIONS

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Symbol	MIN	MAX
A	2.800	3.040
B	2.100	2.640
C	1.200	1.400
D	0.890	1.030
E	1.780	2.050
F	0.450	0.600
G	0.013	0.100
H	0.900	1.110
J	0.085	0.180
K	0.370	0.510
L	0.300	0.500
Unit: mm		

SUGGESTED PAD LAYOUT



Symbol	Type
Q	1.900
Q1	2.000
P	0.900
R	0.800
Unit: mm	

Land Pattern Recommendation

DEVICE MARKING AND ORDERING INFORMATION

DEVICE	Marking	Quantity	Packing
BC817-40	6C	3000/Reel	Tape & Reel

NOTICE:

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