



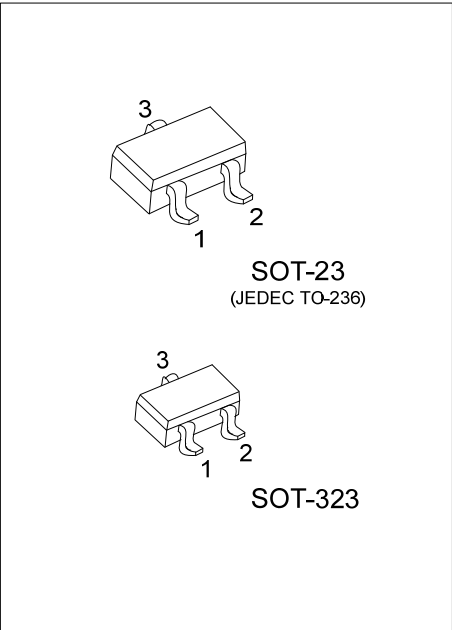
BC817

NPN SILICON TRANSISTOR

NPN GENERAL PURPOSE AMPLIFIER

■ DESCRIPTION

The UTC **BC817** is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.2A.



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BC817L-xx-AE3-R	BC817G-xx-AE3-R	SOT-23	B	E	C	Tape Reel
BC817L-xx-AL3-R	BC817G-xx-AL3-R	SOT-323	B	E	C	Tape Reel

Note: Pin Assignment: B: Base E: Emitter C: Collector

<p>BC817G-xx-AE3-R</p>	<p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323 (3) xx: refer to Classification of h_{FE1} (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

BC817-16	BC817-25	BC817-40
<p>L: Lead Free G: Halogen Free</p>	<p>L: Lead Free G: Halogen Free</p>	<p>L: Lead Free G: Halogen Free</p>

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V _{CES}	50	V
Collector-Emitter Voltage		V _{CEO}	45	V
Emitter-Base Voltage		V _{EBO}	5.0	V
Collector Current -Continuous	Continuous	I _C	1.5	A
	Peak	I _{CM}	1.7	A
Collector Dissipation	SOT-23	P _C	310	mW
	SOT-323		200	mW
Junction Temperature		T _J	+150	°C
Storage Temperature		T _{STG}	-65 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-23	θ _{JA}	403	°C/W
	SOT-323		625	°C/W

Note: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper.

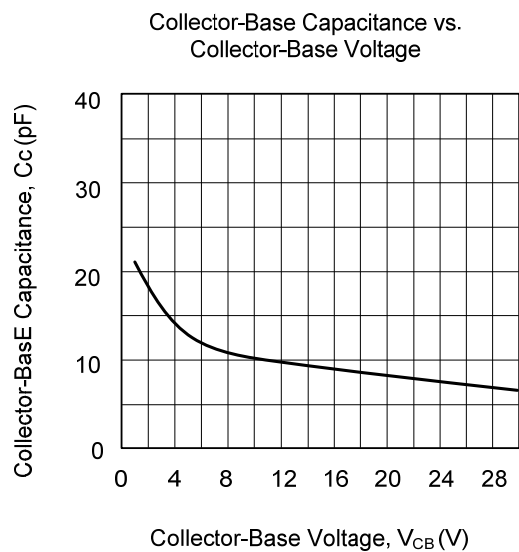
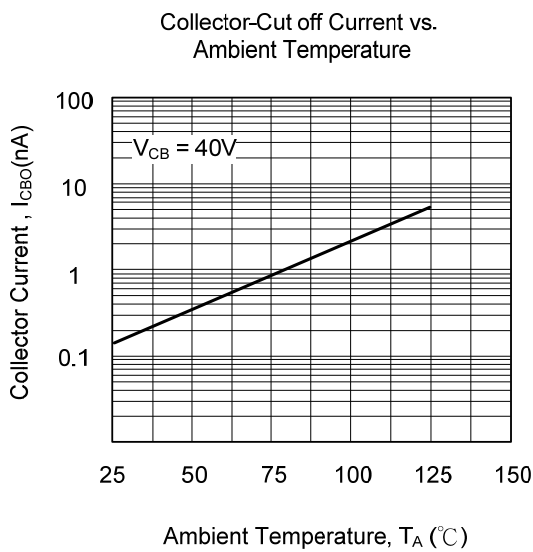
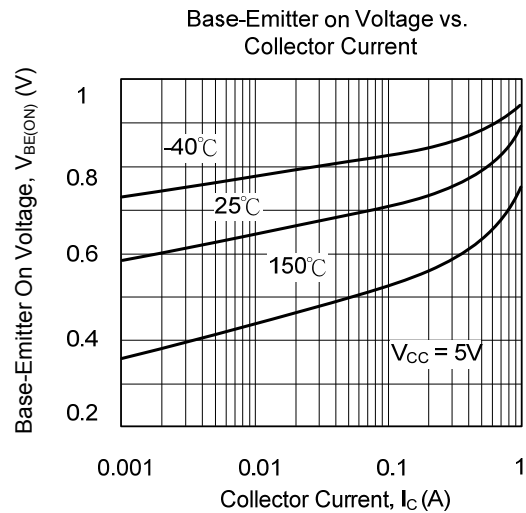
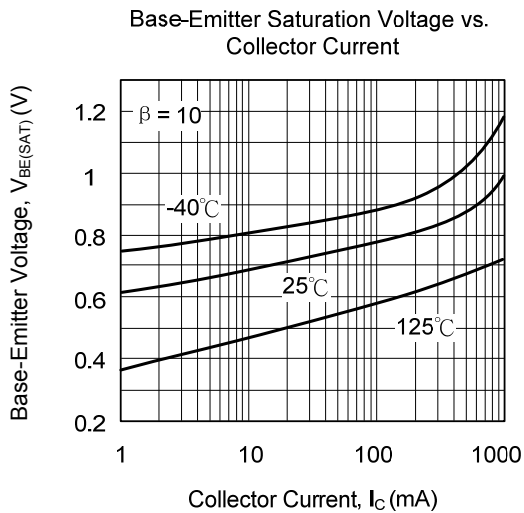
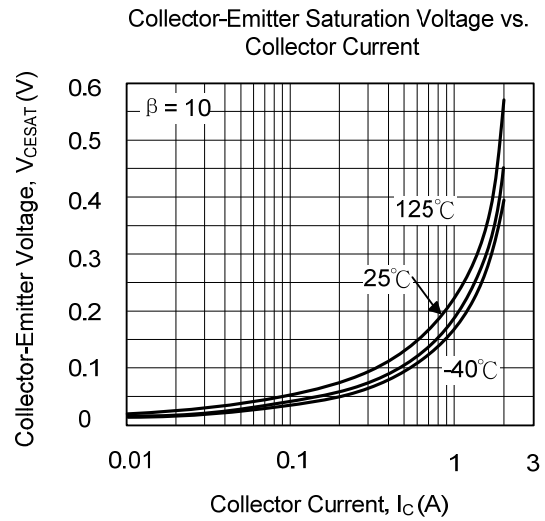
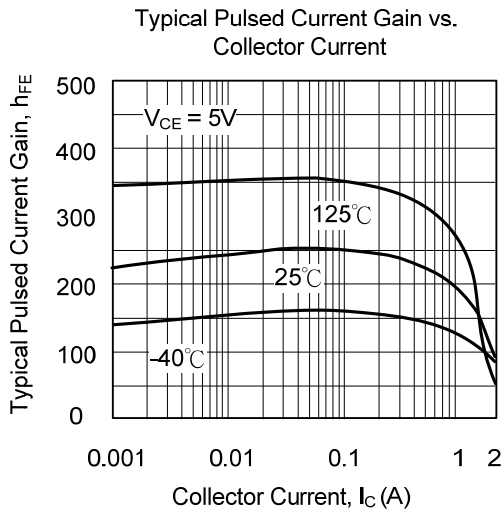
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =10mA, I _B =0	45			V
Collector-Base Breakdown Voltage	BV _{CES}	I _C =100μA, I _E =0	50			V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E =10μA, I _C =0	5			V
Collector Cut-OFF Current	I _{CBO}	V _{CB} =20V			100	nA
		V _{CB} =20V, T _A =150°C			5	μA
Collector Cutoff Current	I _{CEO}	V _{CE} =45V			100	nA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V			100	nA
ON CHARACTERISTICS						
DC Current Gain	h _{FE1}	I _C =100mA, V _{CE} =1.0V	See Classification			
	h _{FE2}	I _C =500mA, V _{CE} =1.0V	40			
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 On Voltage	V _{BE(ON)}	I _C =500mA, V _{CE} =1.0V			1.2	V

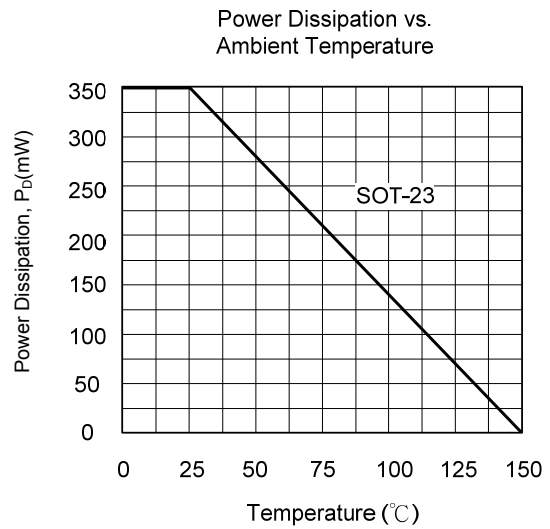
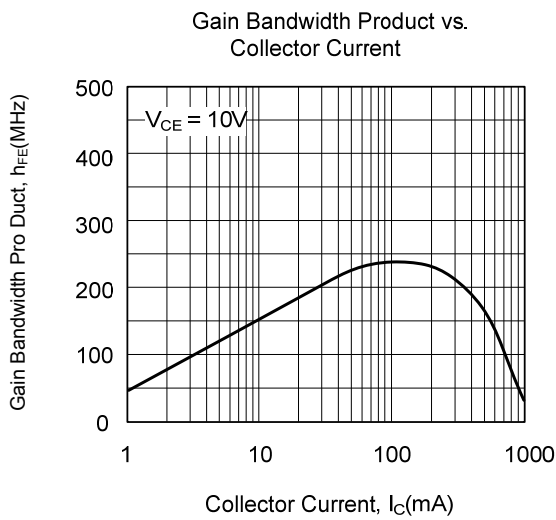
■ CLASSIFICATION OF h_{FE1}

RANK	16	25	40
RANGE	100-250	160-400	250-600

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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