



BC845AS

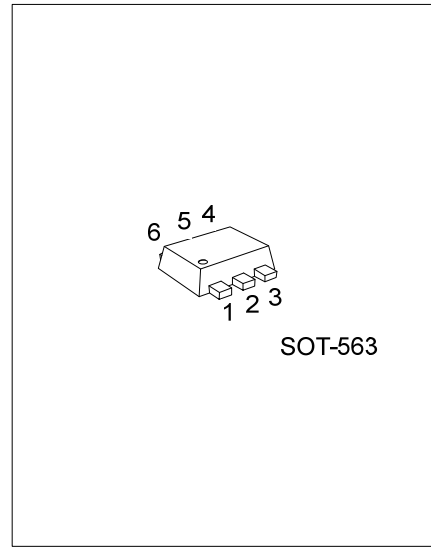
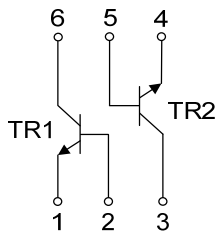
NPN SILICON TRANSISTOR

SWITCHING AND AMPLIFIER APPLICATION

■ **FEATURES**

* Suitable for automatic insertion in thick and thin-film circuits.

■ **EQUIVALENT CIRCUIT**



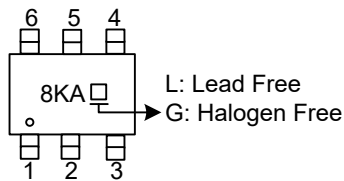
■ **ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
BC84ASL-AN6-R	BC845ASG-AN6-R	SOT-563	E1	B1	C2	E2	B2	C1	Tape Reel

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

<p>BC845ASG-AN6-R</p> <ul style="list-style-type: none"> (1)Packing Type (2)Package Type (3)Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel (2) AN6: SOT-563 (3) G: Halogen Free and Lead Free, L: Lead Free
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■ **MARKING**



■ ABSOLUTE MAXIMUM RATING ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT	
Collector-Base Voltage	V_{CBO}	100	V	
Collector-Emitter Voltage	V_{CEO}	80	V	
Emitter-Base Voltage	V_{EBO}	6	V	
Collector Current (DC)	Continuous	I_C	100	mA
	Peak	I_{CM}	300	mA
Collector Dissipation (Note 2)	P_D	150	mW	
Junction Temperature	T_J	+150	$^{\circ}\text{C}$	
Storage Temperature	T_{STG}	-40 ~ +150	$^{\circ}\text{C}$	

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

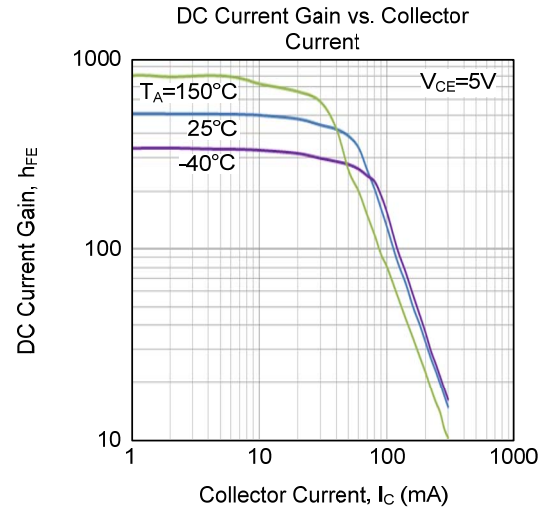
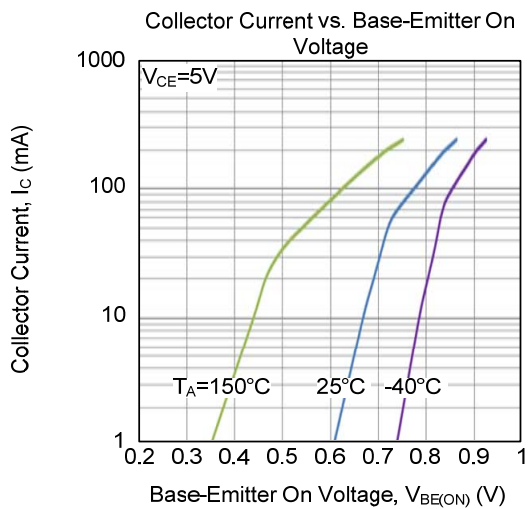
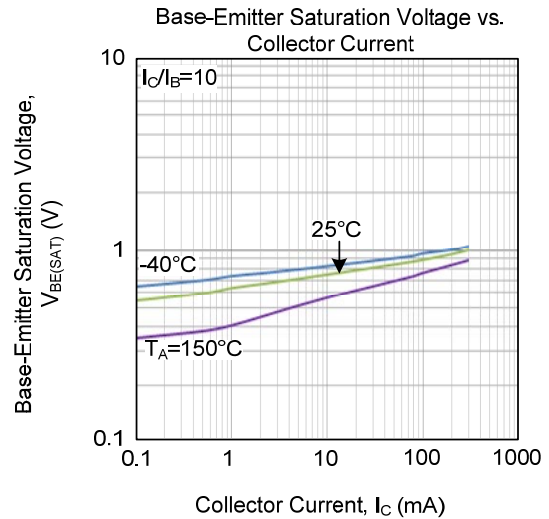
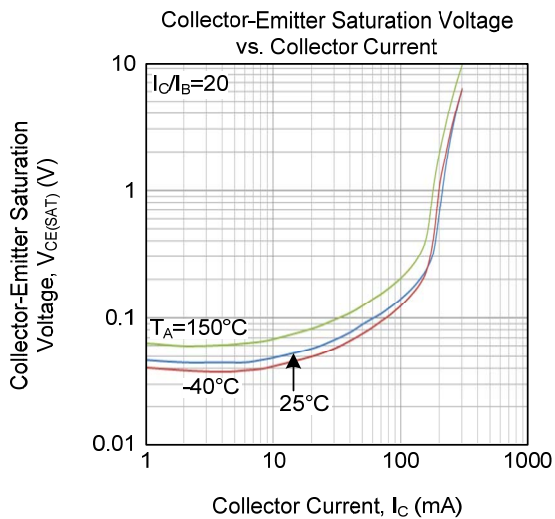
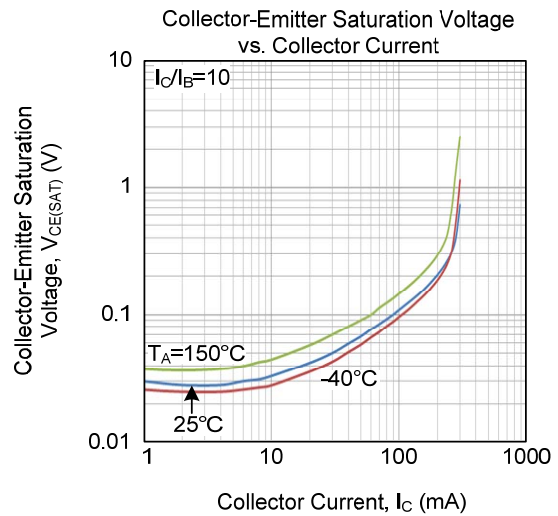
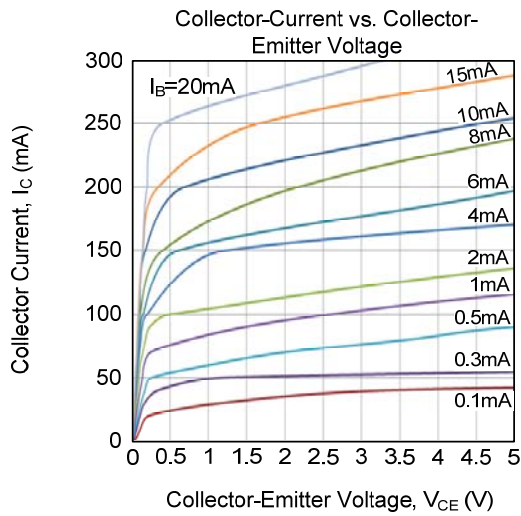
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Transistor mounted on an FR4 printed-circuit board.

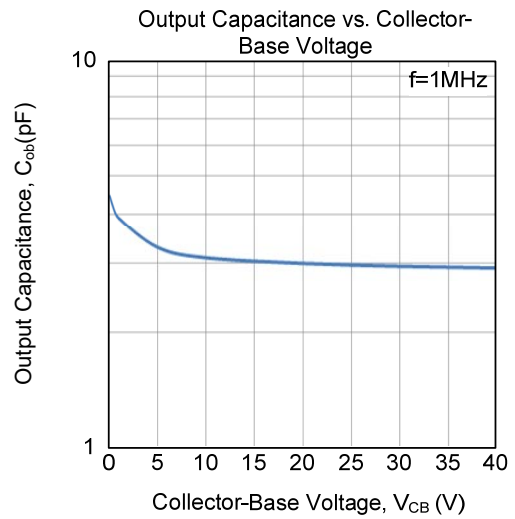
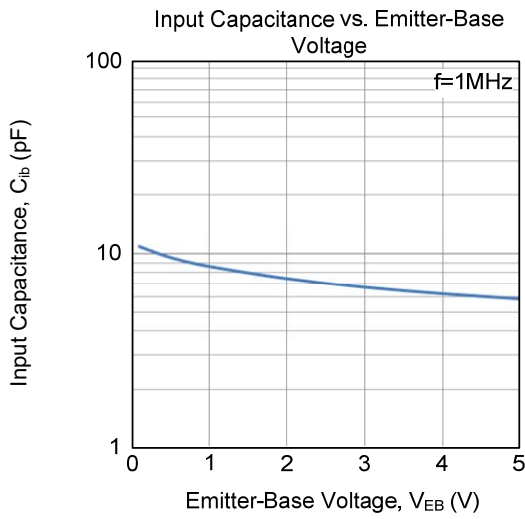
■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=10\mu\text{A}$, $I_E=0$	100			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=2\text{mA}$, $I_B=0$	80			V
Collector-Emitter Breakdown Voltage	BV_{CES}	$I_C=2\text{mA}$, $V_{BE}=0\text{V}$	80			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu\text{A}$, $I_C=0$	6			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30\text{V}$, $I_E=0$			15	nA
Collector Cutoff Current	I_{CEO}	$V_{CE}=40\text{V}$, $I_B=0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=5.0\text{V}$, $I_C=2.0\text{mA}$	400		800	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=10\text{mA}$, $I_B=0.5\text{mA}$		50	200	mV
		$I_C=100\text{mA}$, $I_B=5.0\text{mA}$		140	400	mV
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=10\text{mA}$, $I_B=0.5\text{mA}$		730		mV
		$I_C=100\text{mA}$, $I_B=5.0\text{mA}$		875		mV
Base-Emitter On Voltage	$V_{BE(ON)}$	$V_{CE}=5.0\text{V}$, $I_C=2.0\text{mA}$	550	630	700	mV
		$V_{CE}=5.0\text{V}$, $I_C=10\text{mA}$			720	mV
Current Gain Bandwidth Product	f_T	$V_{CE}=5.0\text{V}$, $I_C=10\text{mA}$, $f=100\text{MHz}$		300		MHz
Output Capacitance	C_{OB}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$		3		pF
Input Capacitance	C_{IB}	$V_{EB}=0.5\text{V}$, $I_C=0$, $f=1.0\text{MHz}$		10		pF
Noise Figure	NF	$V_{CE}=5\text{V}$, $I_C=200\mu\text{A}$, $f=1\text{KHz}$, $R_G=2\text{K}\Omega$			10	dB

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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