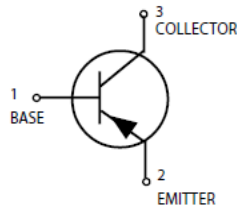
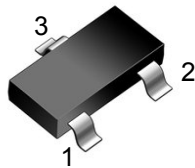


SOT-23

Features

As complementary type the NPN transistor BC846/BC847/BC848 is recommended
 For switching and AF amplifier applications
 Epitaxial planar die construction
 Halogen free and RoHS compliant

MARKING:

BC856A=3A	BC856B=3B	
BC857A=3E	BC857B=3F	BC857C=3G
BC858A=3J	BC858B=3K	BC858C=3L

Mechanical Data

SOT-23 Small Outline Plastic Package
 EpoxyUL: 94V-0

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol		Value	Unit
Collector-Base Voltage	V_{CBO}	BC856	-80	V
		BC857	-50	
		BC858	-30	
Collector-Emitter Voltage	V_{CEO}	BC856	-65	V
		BC857	-45	
		BC858	-30	
Emitter -Base Voltage	V_{EBO}		-6	V
Collector Current-Continuous	I_C		-100	mA
Collector Power Dissipation	P_C		200	mW
Junction Temperature	T_j		150	°C
Storage Temperature	T_{stg}		-55+150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$		625	°C/W

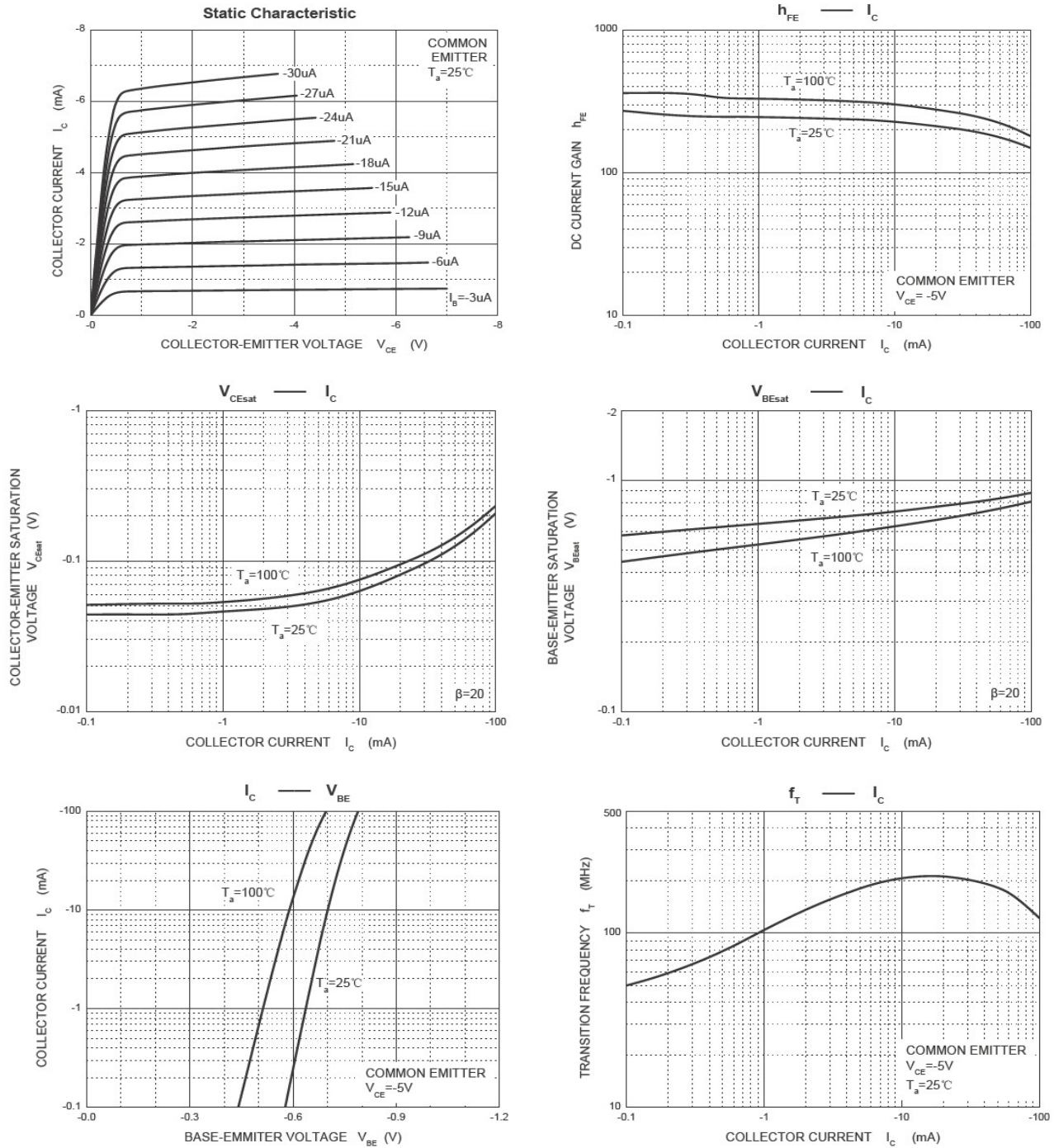
Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

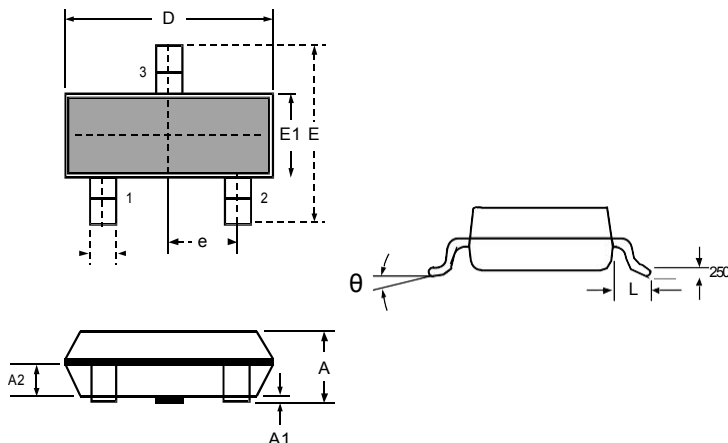
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$ BC856 BC857 BC858	-80 -50 -30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$ BC856 BC857 BC858	-65 -45 -30		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	-6		V
Collector cut-off current	I_{CBO}	$V_{CB} = -70V, I_E = 0$ $V_{CB} = -45V, I_E = 0$ $V_{CB} = -25V, I_E = 0$ BC856 BC857 BC858		-100	nA
Collector cut-off current	I_{CEO}	$V_{CE} = -60V, I_B = 0$ $V_{CE} = -40V, I_B = 0$ $V_{CE} = -25V, I_B = 0$ BC856 BC857 BC858		-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$		-100	nA
DC current gain	h_{FE}	$V_{CE} = -5V, I_C = -2mA$ BC856A;BC857A;BC858A BC856B;BC857B;BC858B BC857C;BC858C	125 220 420	250 475 800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -5mA$		-0.50	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100mA, I_B = -5mA$		-1.10	V
Transition frequency	f_T	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$	100		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, f = 1MHz$		4.5	pF



Ratings and Characteristic Curves



Package Outline Dimensions: SOT-23



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
θ	0	8°	0	8°