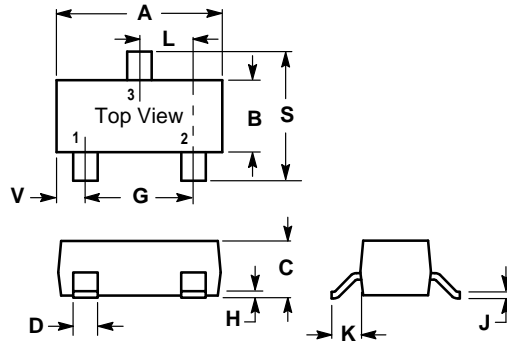
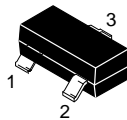
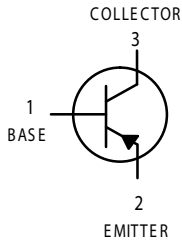


RoHS Compliant Product

FEATURES

- * Ideally suited for automatic insertion
- * For Switching and AF Amplifier Applications
- * Operating Temp. : -55°C ~ +150°C



SOT-323		
Dim	Min	Max
A	1.800	2.200
B	1.150	1.350
C	0.800	1.000
D	0.300	0.400
G	1.200	1.400
H	0.000	0.100
J	0.100	0.250
K	0.350	0.500
L	0.590	0.720
S	2.000	2.400
V	0.280	0.420
All Dimension in mm		

MAXIMUM RATINGS* T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Units	
V _{CB0}	Collector-Base Voltage		V	
		BC856		-80
		BC857		-50
		BC858		-30
V _{CE0}	Collector-Emitter Voltage		V	
		BC856		-65
		BC857		-45
		BC858		-30
V _{EB0}	Emitter-Base Voltage	-5	V	
I _C	Collector Current –Continuous	-0.1	A	
P _{C*}	Collector Dissipation	150	mW	
T _J	Junction Temperature	150	°C	
T _{stg}	Storage Temperature	-65~150	°C	

*Package mounted on FR4 printed circuit board.

DEVICE MARKING

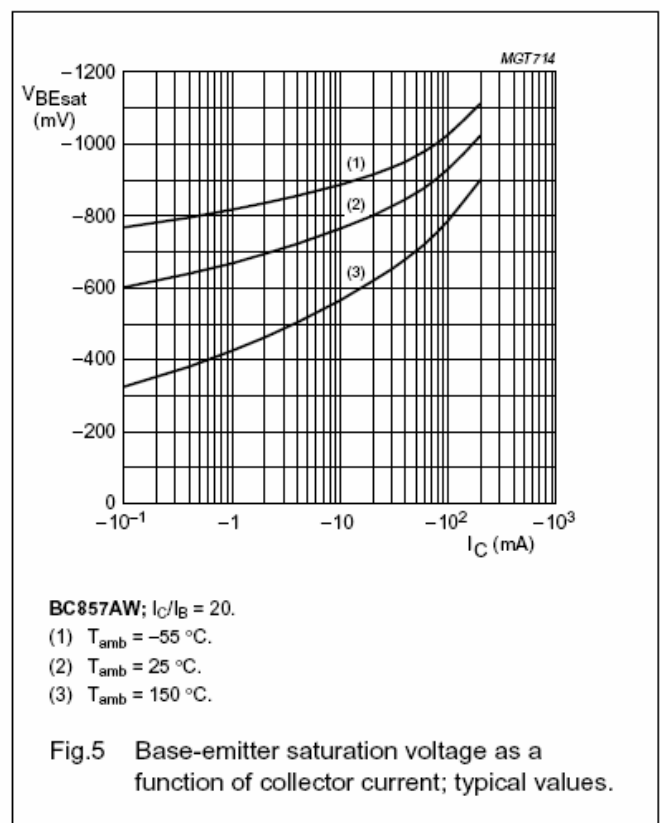
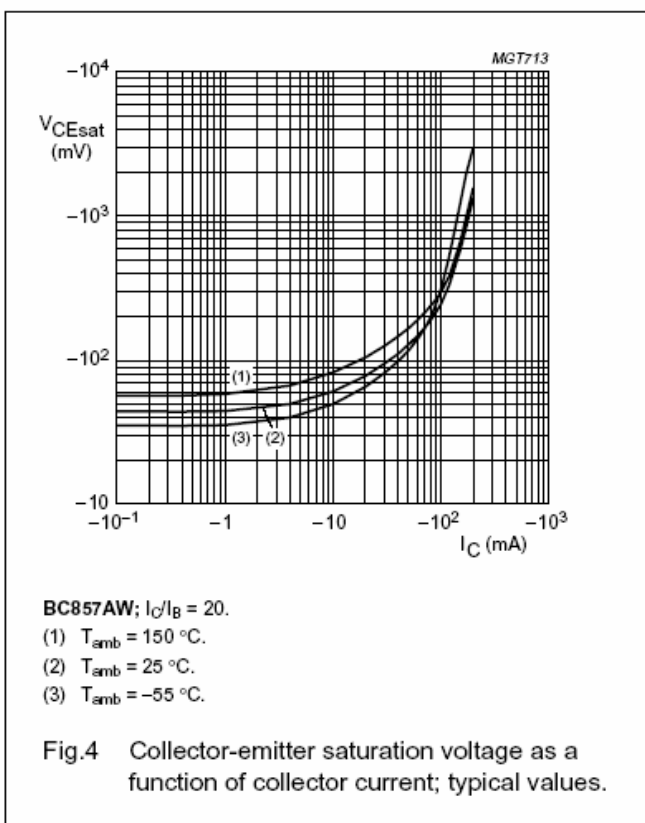
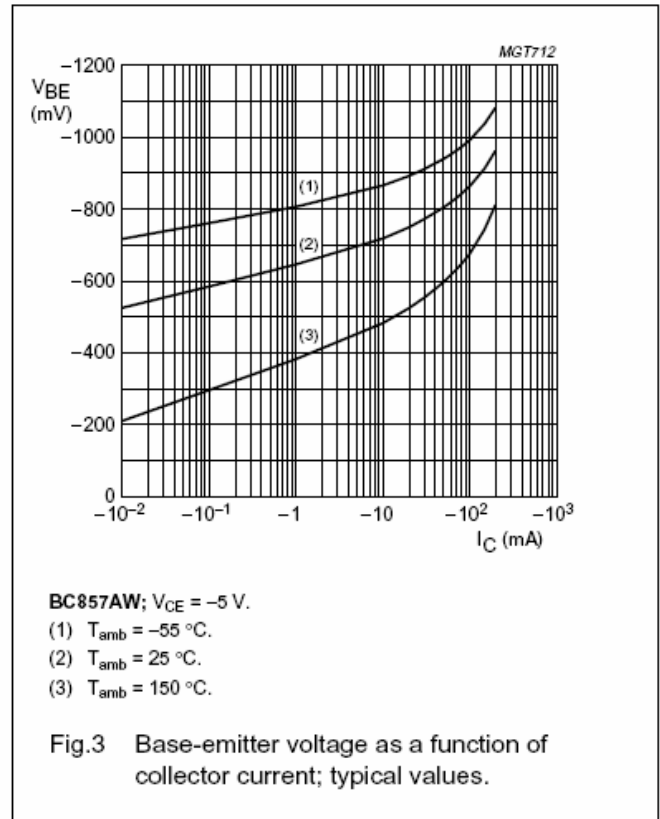
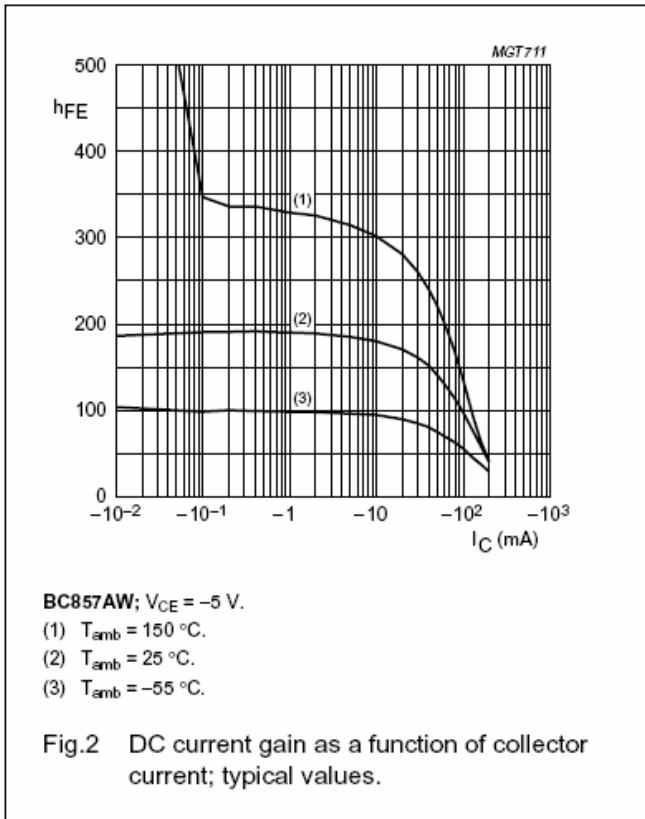
BC856AW=3A; BC856BW=3B;
BC857AW=3E; BC857BW=3F; BC857CW=3G;
BC858AW=3J; BC858BW=3K; BC858CW=3L

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

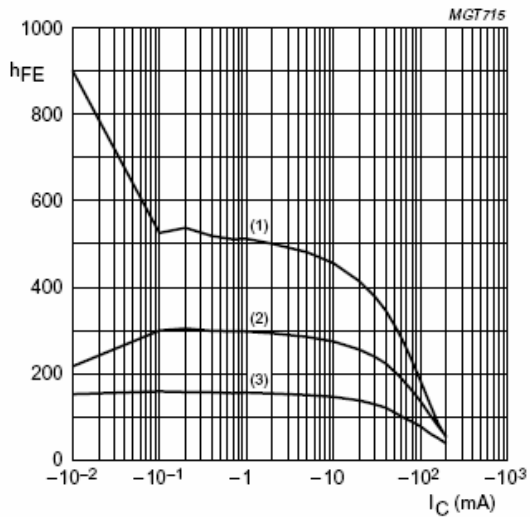
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	BC856	$I_C = -10\mu A, I_E = 0$	-80		V
	BC857		-50		
	BC858		-30		
Collector-emitter breakdown voltage	BC856	$I_C = -10mA, I_B = 0$	-65		V
	BC857		-45		
	BC858		-30		
Emitter-base breakdown voltage	V_{EBO}	$I_E = -1\mu A, I_C = 0$	-5		V
Collector Cutoff Current	I_{CBO}	$V_{CB} = -30V, I_E = 0$		-15	nA
DC current gain	h_{FE}	$V_{CE} = -5V, I_C = -2mA$	125	250	
			220	475	
			420	800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -5mA$		-0.65	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100mA, I_B = -5mA$		-1.1	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

Typical Characteristics

BC856A/BW, BC857A/BW, BC858A/BW



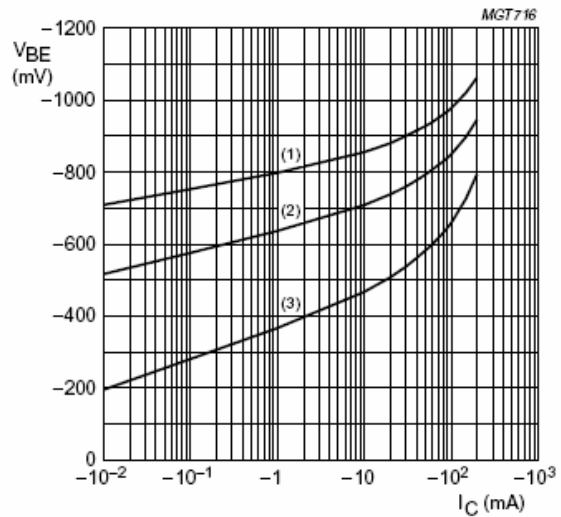
BC856A/BW, BC857A/BW, BC858A/BW



BC857BW; $V_{CE} = -5$ V.

- (1) $T_{amb} = 150$ °C.
- (2) $T_{amb} = 25$ °C.
- (3) $T_{amb} = -55$ °C.

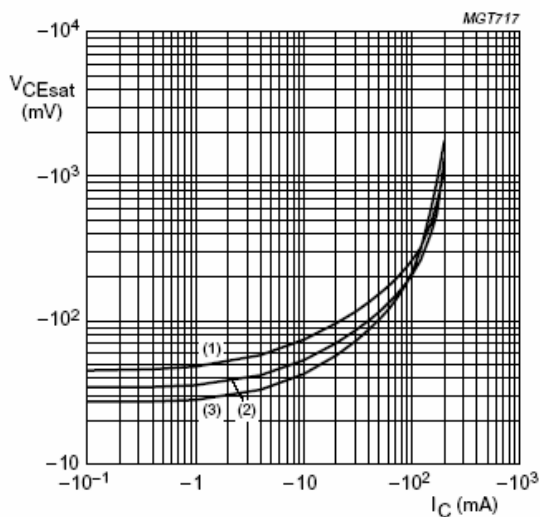
Fig.6 DC current gain as a function of collector current; typical values.



BC857BW; $V_{CE} = -5$ V.

- (1) $T_{amb} = -55$ °C.
- (2) $T_{amb} = 25$ °C.
- (3) $T_{amb} = 150$ °C.

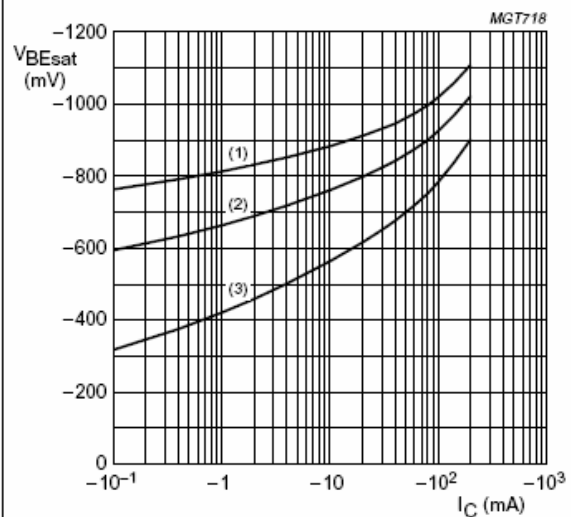
Fig.7 Base-emitter voltage as a function of collector current; typical values.



BC857BW; $I_C/I_B = 20$.

- (1) $T_{amb} = 150$ °C.
- (2) $T_{amb} = 25$ °C.
- (3) $T_{amb} = -55$ °C.

Fig.8 Collector-emitter saturation voltage as a function of collector current; typical values.

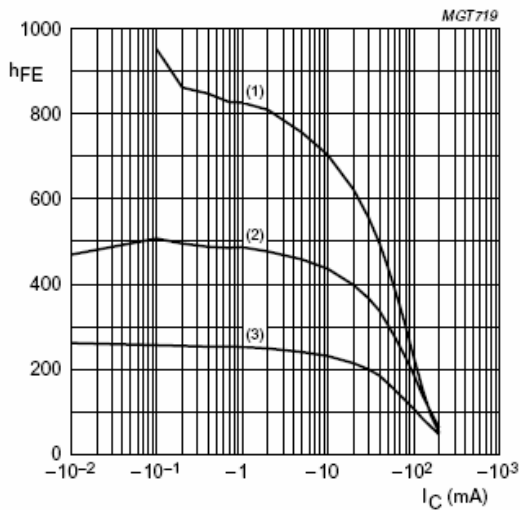


BC857BW; $I_C/I_B = 20$.

- (1) $T_{amb} = -55$ °C.
- (2) $T_{amb} = 25$ °C.
- (3) $T_{amb} = 150$ °C.

Fig.9 Base-emitter saturation voltage as a function of collector current; typical values.

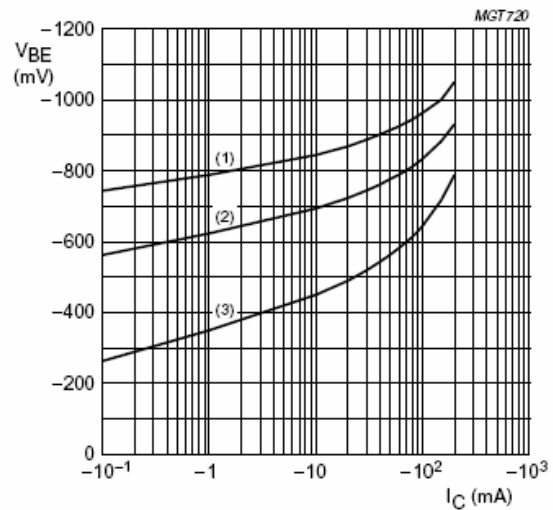
BC856A/BW, BC857A/BW, BC858A/BW



BC857CW; $V_{CE} = -5\text{ V}$.

- (1) $T_{amb} = 150\text{ }^{\circ}\text{C}$.
- (2) $T_{amb} = 25\text{ }^{\circ}\text{C}$.
- (3) $T_{amb} = -55\text{ }^{\circ}\text{C}$.

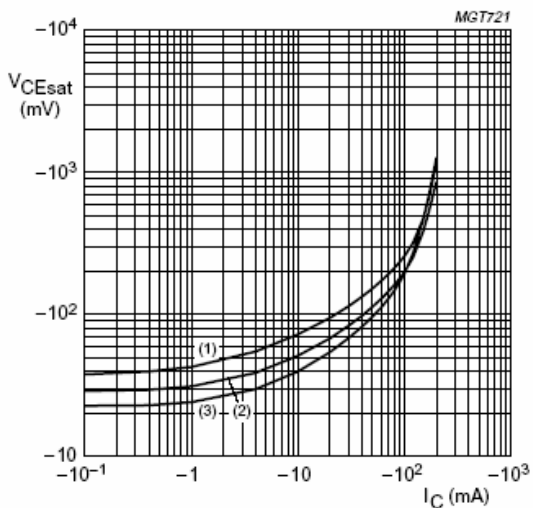
Fig.10 DC current gain as a function of collector current; typical values.



BC857CW; $V_{CE} = -5\text{ V}$.

- (1) $T_{amb} = -55\text{ }^{\circ}\text{C}$.
- (2) $T_{amb} = 25\text{ }^{\circ}\text{C}$.
- (3) $T_{amb} = 150\text{ }^{\circ}\text{C}$.

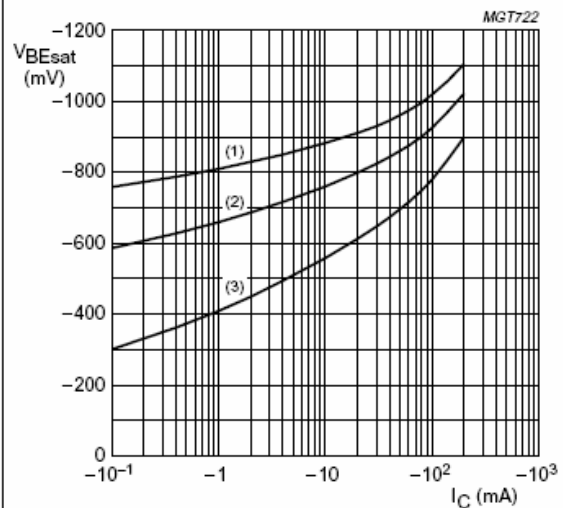
Fig.11 Base-emitter voltage as a function of collector current; typical values.



BC857CW; $I_C/I_B = 20$.

- (1) $T_{amb} = 150\text{ }^{\circ}\text{C}$.
- (2) $T_{amb} = 25\text{ }^{\circ}\text{C}$.
- (3) $T_{amb} = -55\text{ }^{\circ}\text{C}$.

Fig.12 Collector-emitter saturation voltage as a function of collector current; typical values.



BC857CW; $I_C/I_B = 20$.

- (1) $T_{amb} = -55\text{ }^{\circ}\text{C}$.
- (2) $T_{amb} = 25\text{ }^{\circ}\text{C}$.
- (3) $T_{amb} = 150\text{ }^{\circ}\text{C}$.

Fig.13 Base-emitter saturation voltage as a function of collector current; typical values.