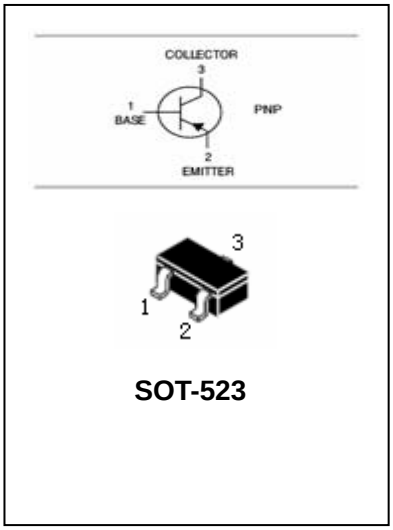
PNP General Purpose Transistor BC856T/BC857T

FEATURES

- Low current(max.100mA).
- Low voltage(max.65V).

Lead-free



SOT-523

APPLICATIONS

- General purpose switching and amplification,especially In portable equipment.

ORDERING INFORMATION

Type No.	Marking	Package Code
BC856AT	3A	SOT-523
BC856BT	3B	SOT-523
BC857AT	3E	SOT-523
BC857BT	3F	SOT-523
BC857CT	3G	SOT-523

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Limits	Unit
V_{CBO}	collector-base voltage BC856AT; BC856BT BC857AT; BC857BT; BC857CT	 -80 -50	V
V_{CEO}	collector-emitter voltage BC856AT; BC856BT BC857AT; BC857BT; BC857CT	 -65 -45	V
V_{EBO}	emitter-base voltage	-5	V
I_C	collector current	-100	mA
I_{CM}	peak collector current	-200	mA
I_{BM}	peak base current	-100	mA
P_{tot}	Total power dissipation	150	mW
$R_{\theta JA}$	Thermal resistance, junction to Ambient	833	°C/W
T_{stg}	storage temperature range	-65 to +150	°C
T_j	junction temperature	150	°C

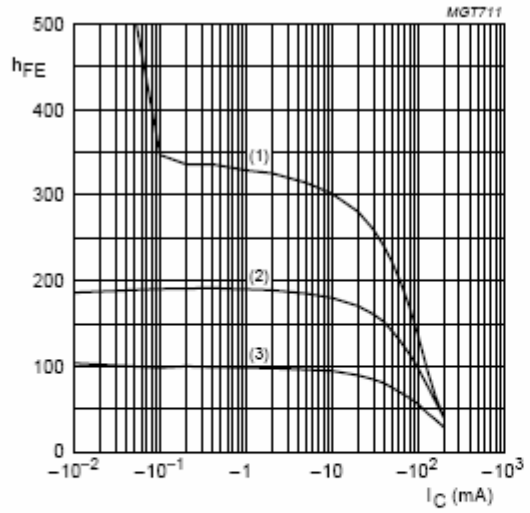
PNP General Purpose Transistor BC856T/BC857T

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	Typ.	MAX.	UNIT
I_{CBO}	Collector cut-off current	I_E=0,V_{CB}=-30V			-15	nA
		I_E=0,V_{CB}=-30V,T_j=150℃			-5	uA
I_{EBO}	Emitter cut-off current	I_C=0,V_{EB}=-5V			-100	nA
h_{FE}	DC current gain BC856AT; BC856BT BC857AT; BC857BT BC857CT	V_{CE}=-5V,I_C=-2mA	 125 220 420	 - - -	 250 475 800	
$V_{CE(sat)}$	collector-emitter saturation voltage	I_C=-10mA,I_B=-0.5mA			-200	mV
		I_C=-100mA,I_B=-5mA(note1)			-400	mV
V_{BE}	Base- emitter voltage	I_C=-2mA, V_{CE}=-5V	-580		-700	mV
		I_C=-10mA, V_{CE}=-5V			-770	mV
C_C	Collector capacitance	I_E=0,V_{CB}=-10V,f=1MHz			2.5	pF
C_e	Emitter capacitance	I_C=0,V_{EB}=-0.5V,f=1MHz		10		pF
F	Noise figure	I_C=200uA,V_{CE}=-5V, R_S=2kΩ,f=1kHZ,B=200Hz			10	dB
f_T	transition frequency	I_C=-10mA,V_{CE} =-5V, f=100MHz	100			MHz

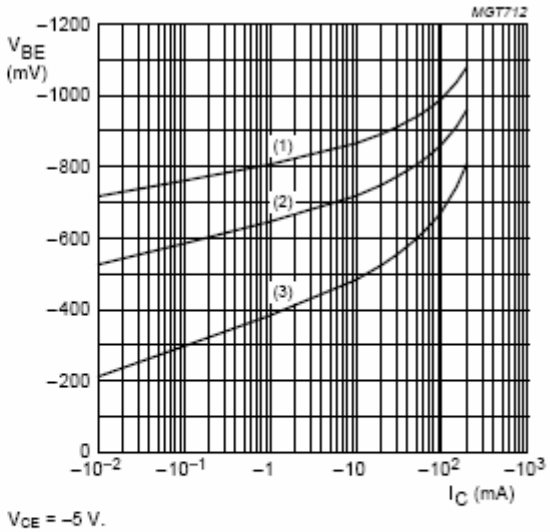
Note 1.Pulse test:t_p≤300uS;δ≤0.02

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



V_{CE} = −5 V.
(1) T_{amb} = 150 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = −55 °C.

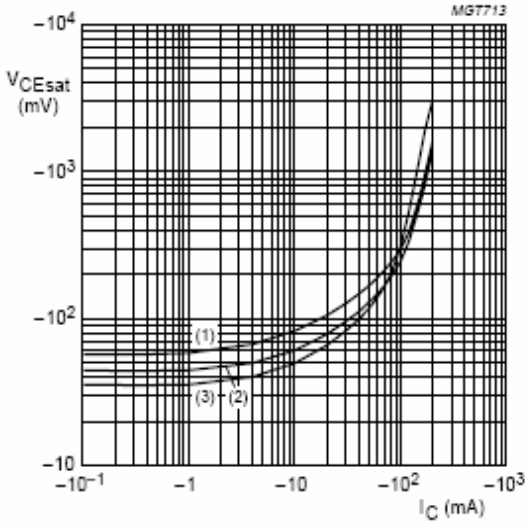
Fig.2 DC current gain; typical values.



V_{CE} = −5 V.
(1) T_{amb} = −55 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = 150 °C.

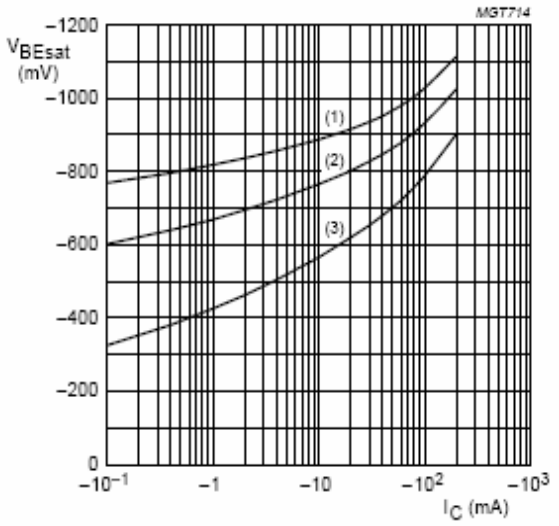
Fig.3 Base-emitter voltage as a function of collector current; typical values.

PNP General Purpose Transistor BC856T/BC857T



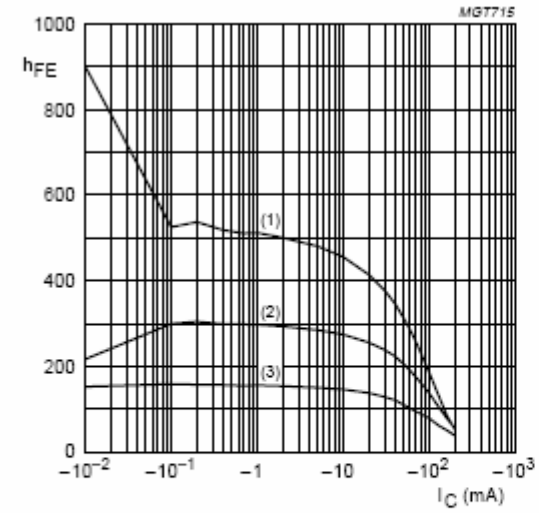
I_C/I_B = 20.
(1) T_{amb} = 150 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = −55 °C.

Fig.4 Collector-emitter saturation voltage as a function of collector current; typical values.



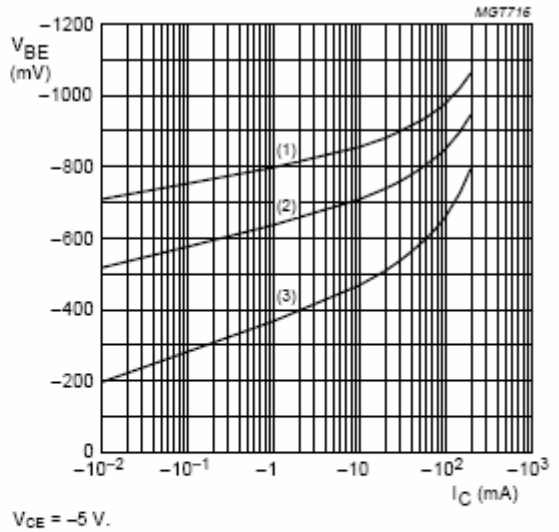
I_C/I_B = 20.
(1) T_{amb} = −55 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = 150 °C.

Fig.5 Base-emitter saturation voltage as a function of collector current; typical values.



V_{CE} = −5 V.
(1) T_{amb} = 150 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = −55 °C.

Fig.6 DC current gain; typical values.



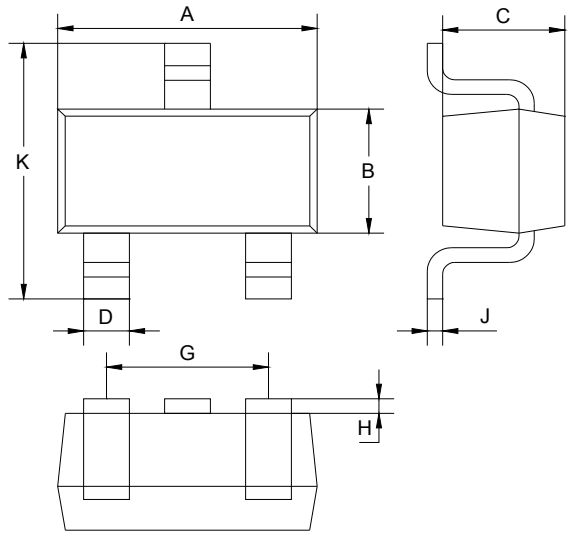
V_{CE} = −5 V.
(1) T_{amb} = −55 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = 150 °C.

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

PNP General Purpose Transistor BC856T/BC857T

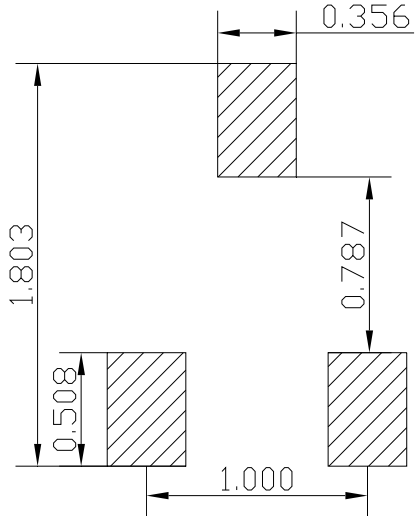
PACKAGE OUTLINE

Plastic surface mounted package SOT-523



SOT-523		
Dim	Min	Max
A	1.5	1.7
B	0.75	0.85
C	0.6	0.8
D	0.15	0.3
G	0.9	1.1
H	0.02	0.1
J	0.1Typical	
K	1.45	1.75
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
BC856T/BC857T	SOT-523	3000/Tape&Reel