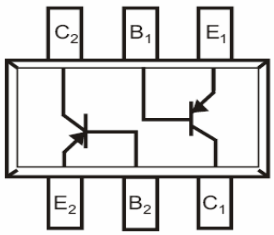
PNP general purpose Transistor BC856S

FEATURES

- For AF input stages and driver applications
- High current gain
- Low collector-emitter saturation voltage
- Two (galvanic) internal isolated Transistors with good matching in one package

Lead-free



SOT-363

APPLICATIONS

- General purpose switching and amplification.

ORDERING INFORMATION

Type No.	Marking	Package Code
BC856S	3D	SOT-363

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	65	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	100	mA
P_C	Collector Dissipation	250	mW
T_j,T_{stg}	Junction and Storage Temperature	-65 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA,I_E=0	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA,I_B=0	65			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=30V,I_E=0			15	nA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=5V,I_C=10uA V_{CE}=5V,I_C=-2mA	200	250 290	475	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA, I_B=0.5mA I_C=100mA, I_B=5mA			0.3 0.65	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10mA, I_B=0.5mA I_C=100mA, I_B=5mA		0.7 0.85		V
Base-emitter voltage	$V_{BE(on)}$	I_C=2mA,V_{CE}=5V I_C=10mA,V_{CE}=5V	0.6	0.65	0.75 0.82	V
collector capacitance	C_c	V_{CB}=10V,f=1MHz		3		pF
Transition frequency	F	I_C=-200uA,V_{CE}=5V, R_S=2kΩ,f=1kHz, B=200Hz			10	dB
Transition frequency	f_T	V_{CE}=5V, I_C= 20mA f=100MHz		250		MHz

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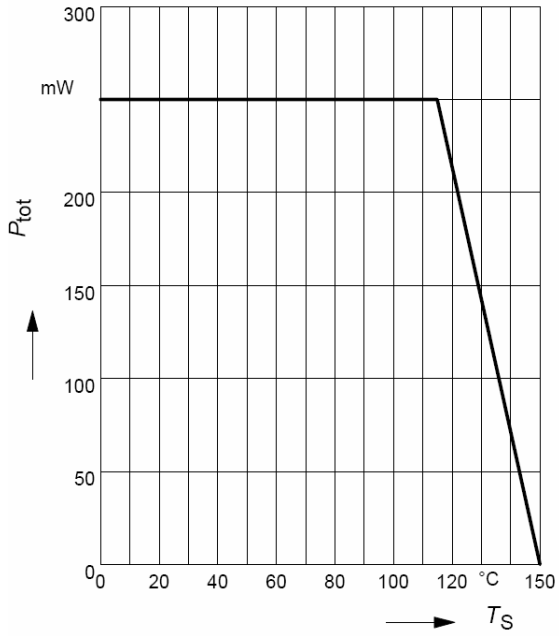
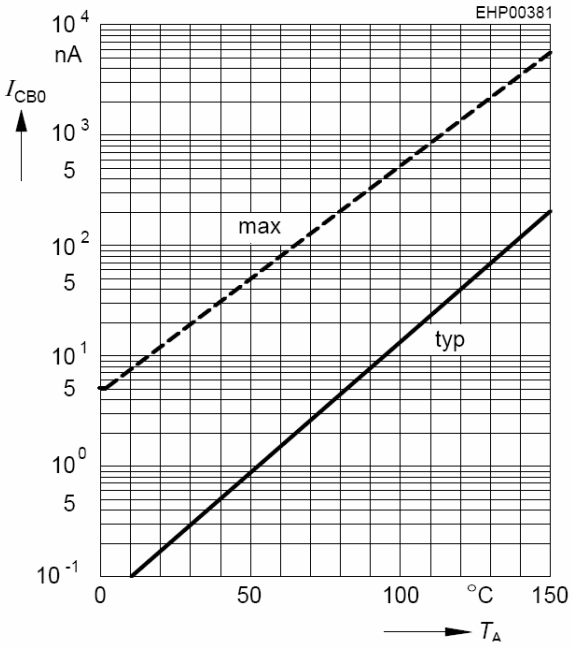
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Total power dissipation $P_{tot} = f(T_S)$



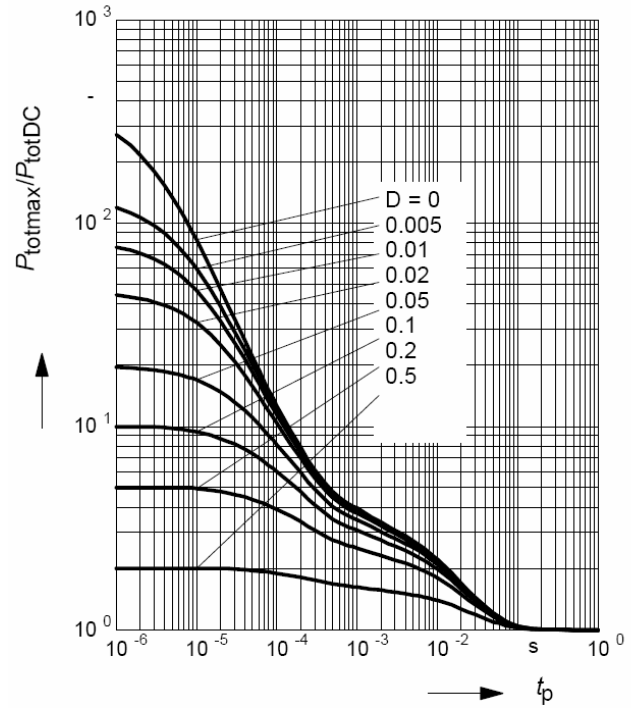
Collector cutoff current $I_{CBO} = f(T_A)$

V_{CB} = 30V



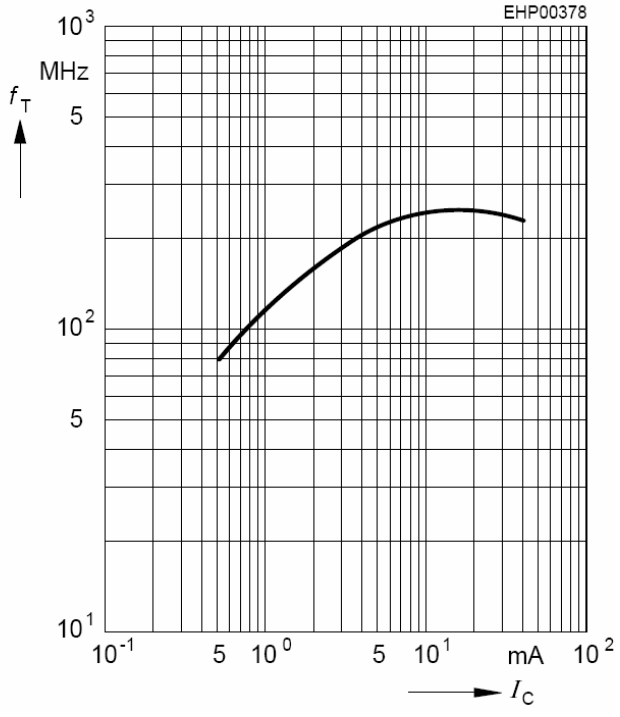
Permissible Pulse Load

$P_{totmax} / P_{totDC} = f(t_p)$



Transition frequency $f_T = f(I_C)$

V_{CE} = 5V



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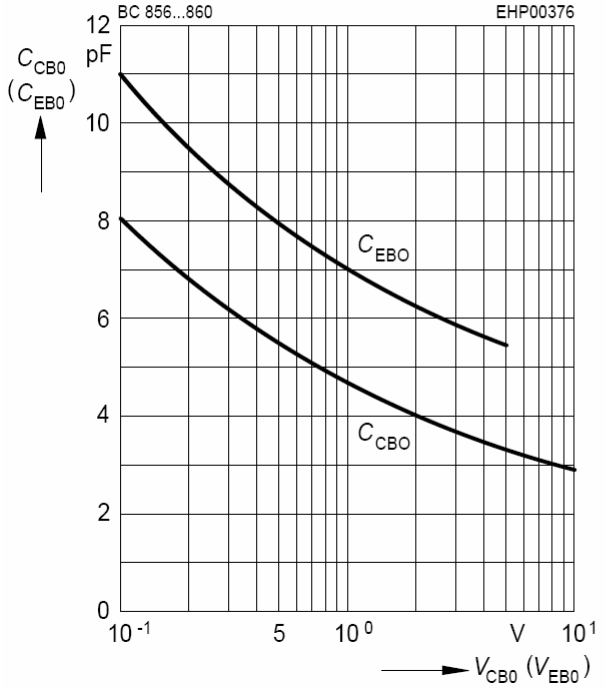
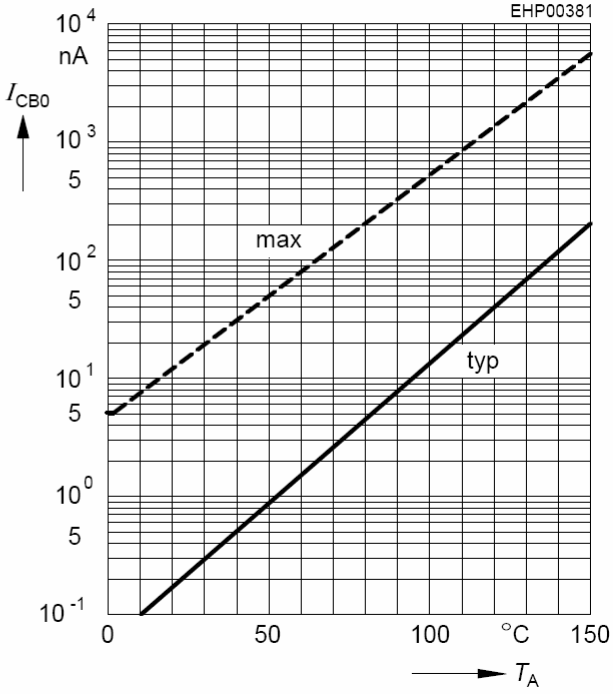
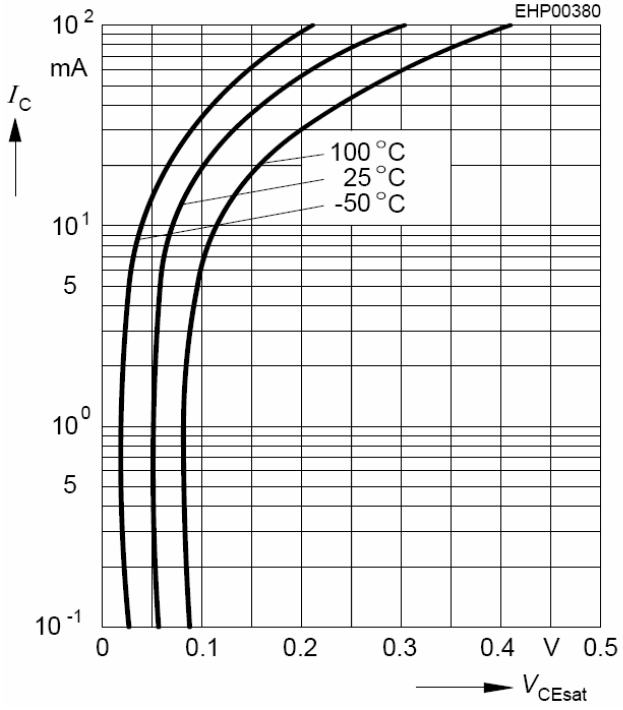
Collector-base capacitance $C_{CB} = f(V_{CBC}$
Emitter-base capacitance $C_{EB} = f(V_{EBO})$



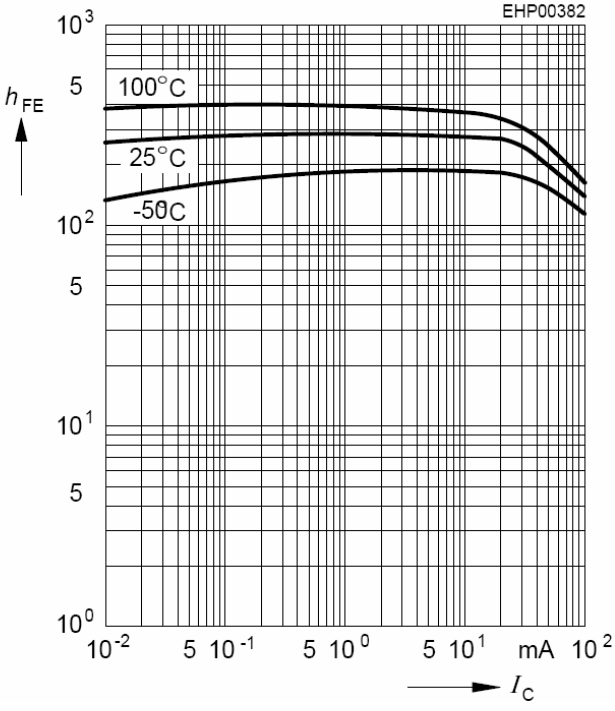
Collector cutoff current $I_{CBO} = f(T_A)$
V_{CB} = 30V



Collector-emitter saturation voltage
$I_C = f(V_{CEsat})$, h_{FE} = 20



DC current gain $h_{FE} = f(I_C)$
V_{CE} = 5V



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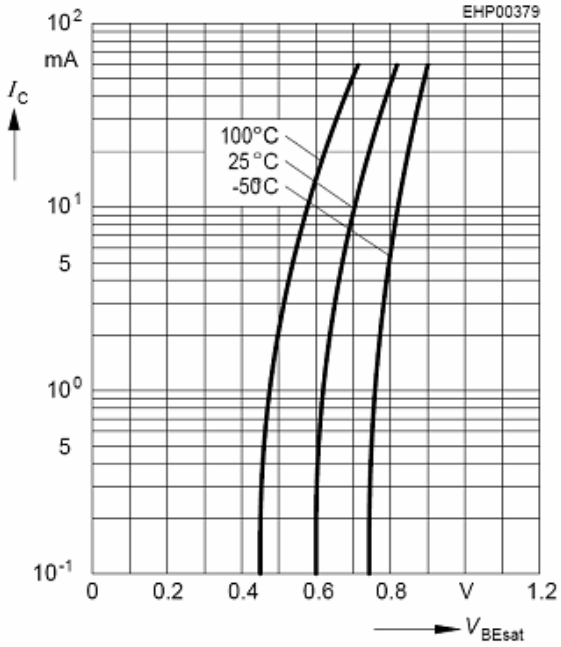
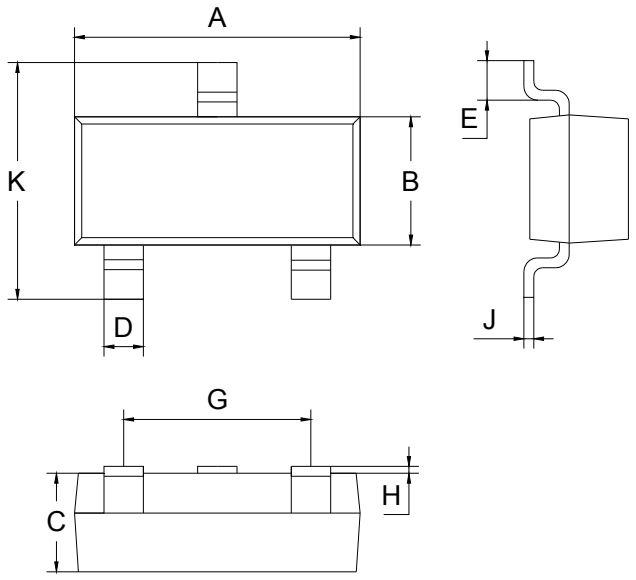
Base-emitter saturation voltage

$I_C = f(V_{BEsat})$, $h_{FE} = 20$



PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

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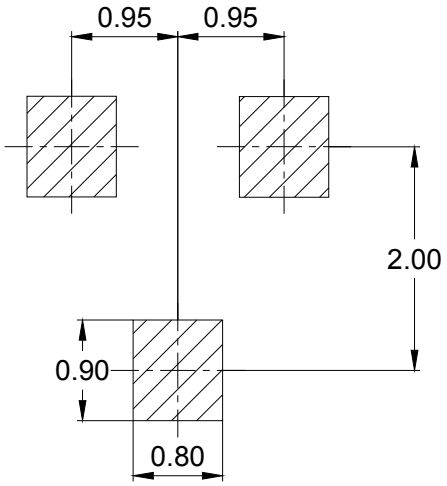
SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
BC856S	SOT-363	3000/Tape&Reel