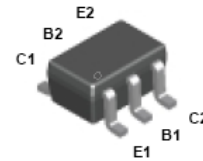
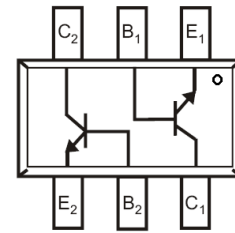


FEATURES

- High current gain
- Excellent h_{FE} linearity
- Low noise between 30Hz and 15kHz
- For AF input stages and driver applications

APPLICATIONS

- General purpose switching and amplification



SOT-363

ORDERING INFORMATION

Type No.	Marking	Package Code
BC846AS/BS	1A/1B	SOT-363

MAXIMUM RATING @ Ta=25°C 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	6	V
I_C	Collector Current -Continuous	0.1	A
P_C	Collector Dissipation	250	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	500	°C/W
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	°C



BC846S

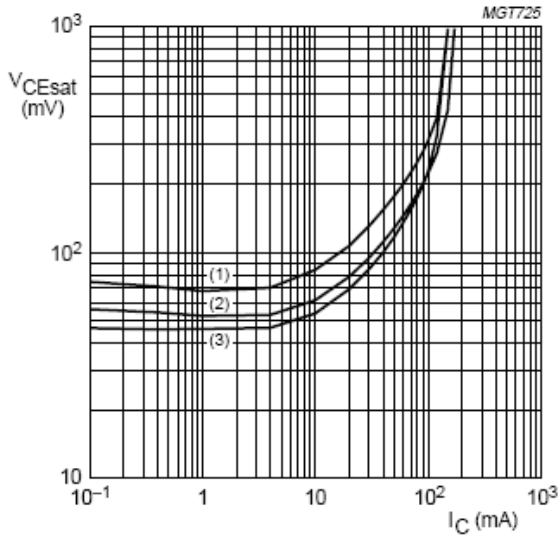
Dual Bipolar Transistor(NPN+NPN)



ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	65			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Collector-base cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$ $V_{CB}=30V, I_E=0, T_j=150^\circ C$			15 5	nA uA
Emitter-base cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			100	nA
DC current gain	BC846AS BC846BS	h_{FE}		90 150		
DC current gain	BC846AS BC846BS	h_{FE}	110 200		220 450	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5mA$		0.09 0.2	0.25 0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5mA$		0.7 0.9		V
Base-emitter voltage	$V_{BE(on)}$	$I_C=2mA, V_{CE}=5V$ $I_C=10mA, V_{CE}=5V$	0.58	0.66	0.7 0.77	V
Collector capacitance	C_C	$V_{CB}=10V, I_E=I_C=0,$ $f=1MHz$		2.5		pF
Transition frequency	f_T	$V_{CE}=5V, I_C=10mA$ $f=100MHz$	100			MHz

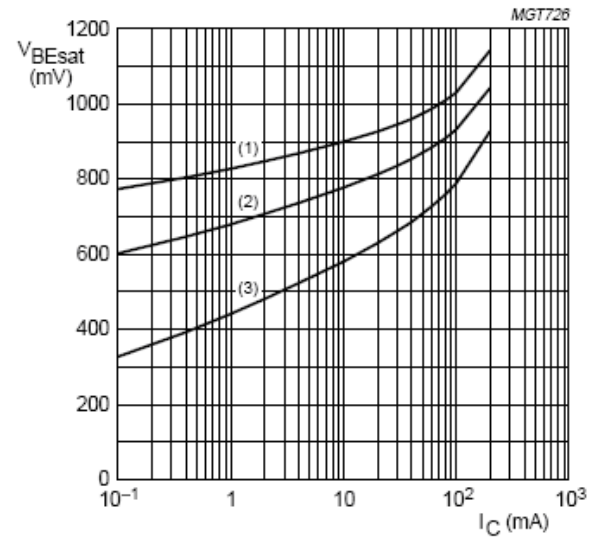
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



BC846AS; $I_C/I_B = 20$.

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



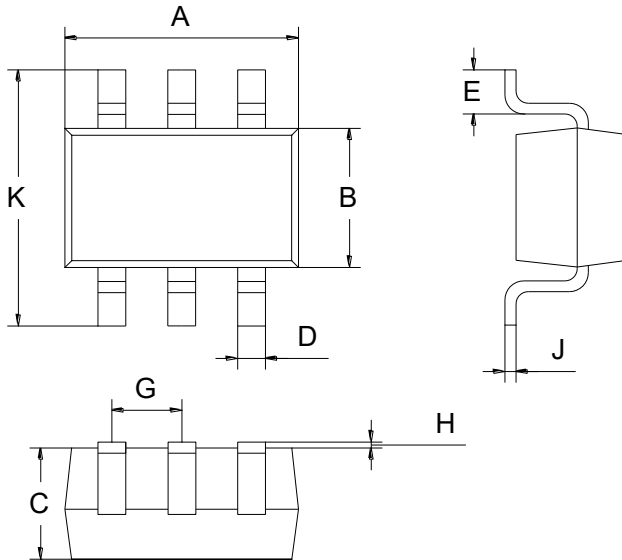
BC846AS; $I_C/I_B = 10$.

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

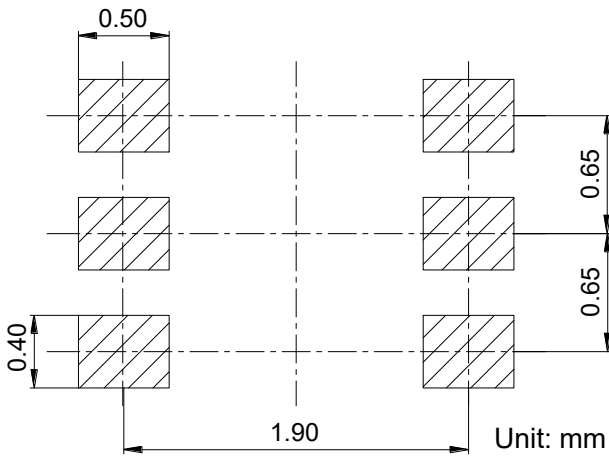
PACKAGE OUTLINE

Plastic surface mounted package



SOT-363		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.85	1.05
D	0.15	0.35
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40
All Dimensions in mm		

SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BC846AS/BS	SOT-363	3000 pcs / Tape & Reel