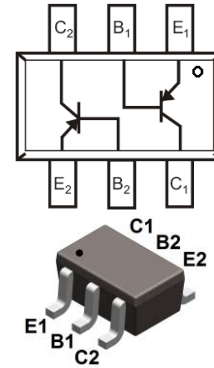




FEATURES

- Epitaxial planar die construction.
- Complementary NPN type available BC847S.
- Ultra-small surface mount package.



SOT-363

APPLICATIONS

- For Low power amplification and switching.

ORDERING INFORMATION

Type No.	Marking	Package Code
BC857BS	3C	SOT-363

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-200	mA
P_D	Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	415	°C/W
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	°C



BC857BS

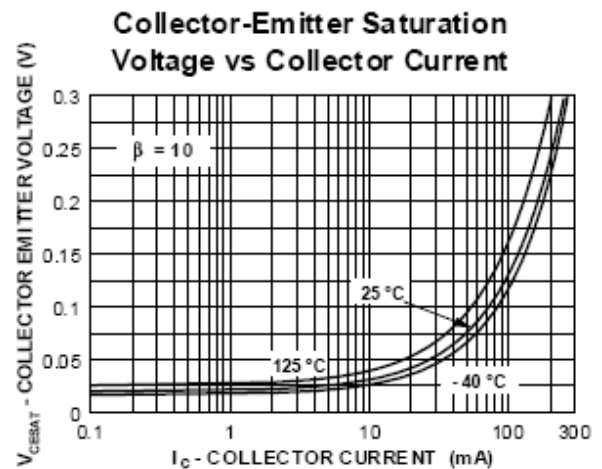
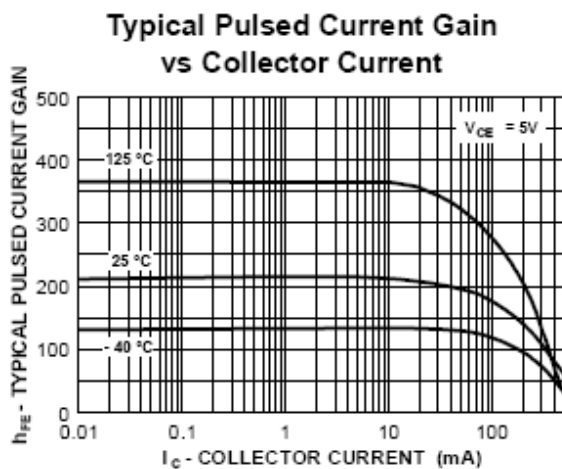
Dual Bipolar Transistor(PNP+PNP)



ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

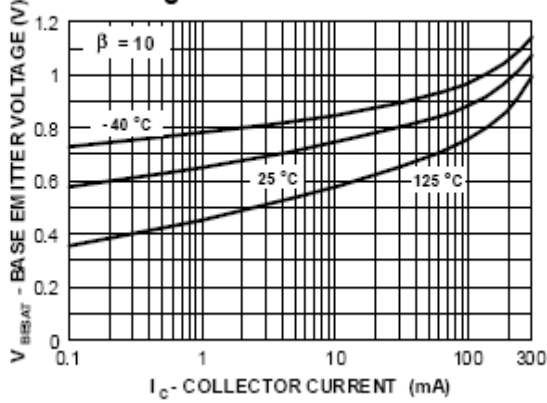
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A$ $I_E=0$	-50	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA$ $I_B=0$	-45	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu A$ $I_C=0$	-5	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=-30V$ $I_E=0$ $V_{CB}=-30V$ $I_E=0$ $T_A=150^\circ C$	-	-15 -4.0	nA μA
DC current gain	h_{FE}	$V_{CE}=-5V$ $I_C=-2.0mA$	200	475	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-10mA$ $I_B=-0.5mA$ $I_C=-100mA$ $I_B=-5.0mA$	-	-0.3 -0.65	V
Base-emitter on voltage	$V_{BE(on)}$	$I_C=-2.0mA$ $V_{CE}=-5.0V$ $I_C=-10mA$ $V_{CE}=-5.0V$	-0.6	-0.75 -0.82	V
Transition frequency	f_T	$V_{CB}=-5.0V$, $I_C=-10mA$, $f=100MHz$	200		MHz
Output Capacitance	C_{obo}	$V_{CB}=-10V$, $f=1.0MHz$	-	3.5	pF
Noise figure	NF	$I_C=0.2mA$, $V_{CE}=5.0$, $R_S=2.0K\Omega$, $f=1.0kHz$, $BW=200Hz$		2.5	dB

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

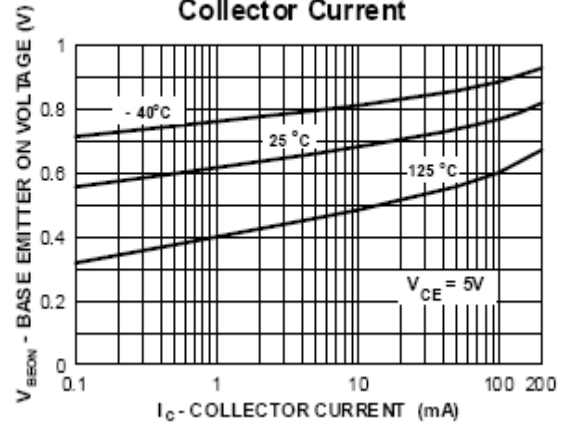




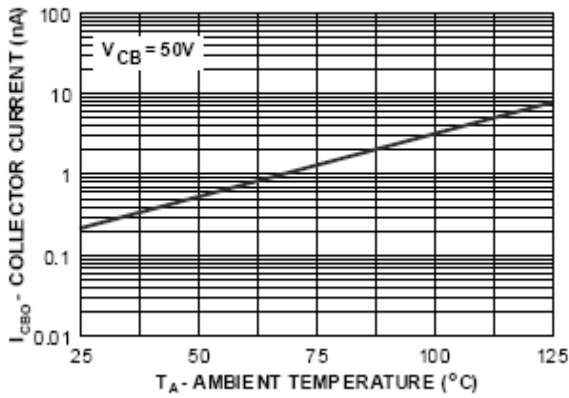
Base-Emitter Saturation Voltage vs Collector Current



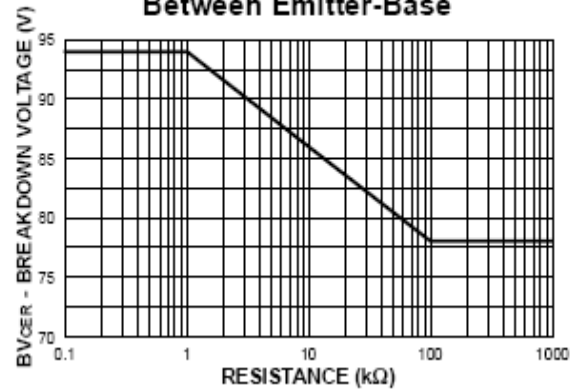
Base Emitter ON Voltage vs Collector Current



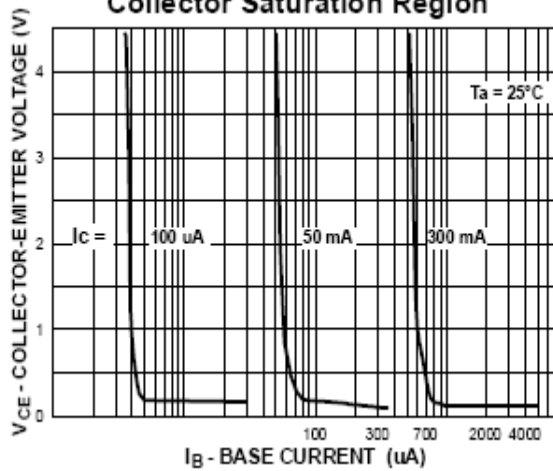
Collector-Cutoff Current vs Ambient Temperature



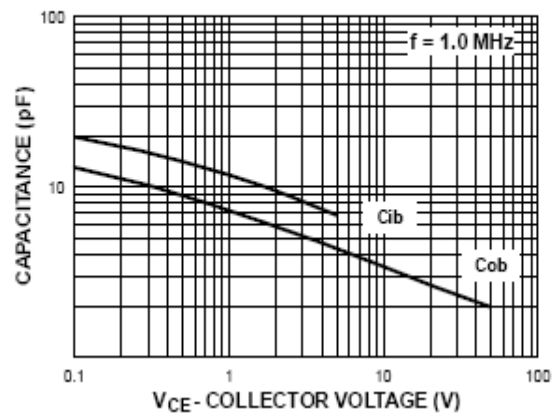
Collector-Emitter Breakdown Voltage with Resistance Between Emitter-Base



Collector Saturation Region

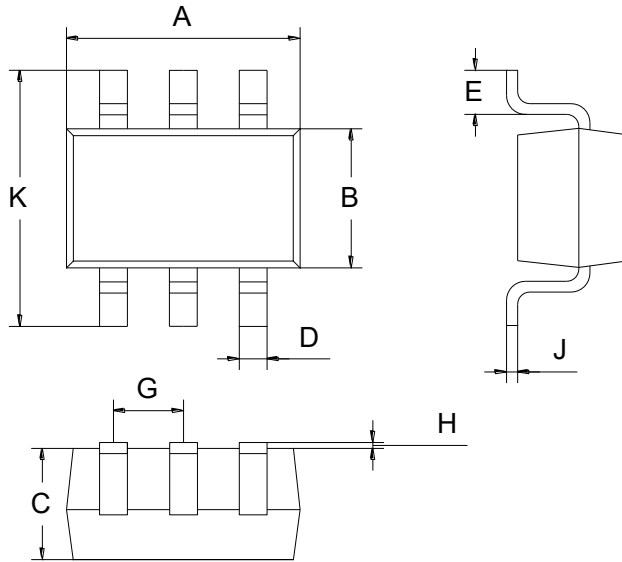


Input and Output Capacitance vs Reverse Voltage



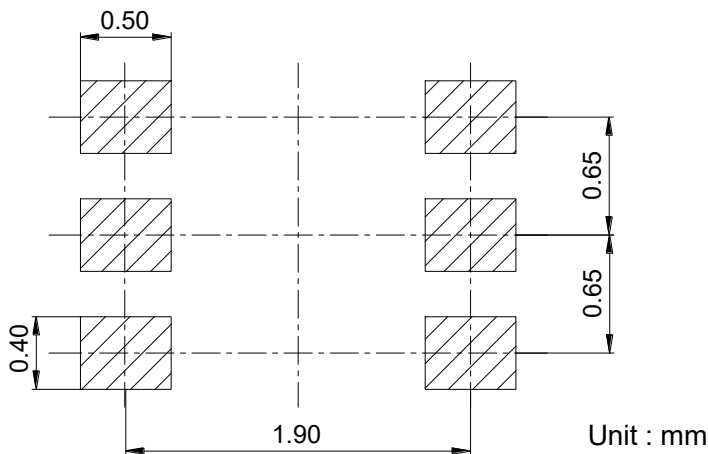
PACKAGE OUTLINE

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
BC857BS	SOT-363	3000 pcs / Tape & Reel