



## Dual PNP Small Signal Surface Mount Transistor

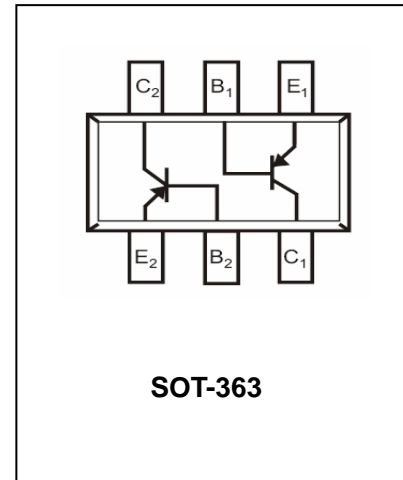
## BC857S

### FEATURES

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



Lead-free



### APPLICATIONS

- For Low power amplification and switching.

### ORDERING INFORMATION

Type No.	Marking	Package Code
BC857S	3C	SOT-363

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	-50	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-45	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-200	mA
P <sub>D</sub>	Power Dissipation	300	mW
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	415	°C/W
T <sub>j</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-55 to +150	°C



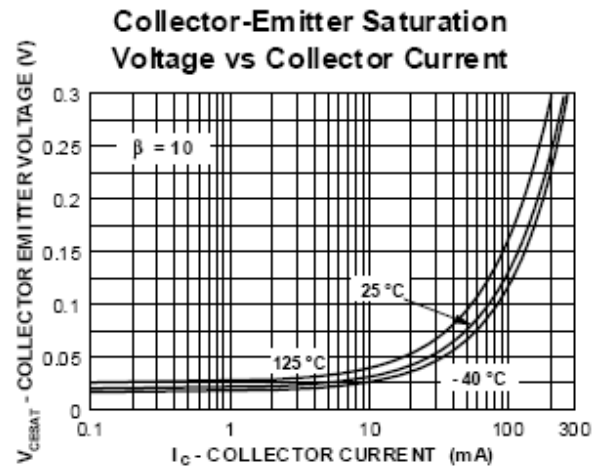
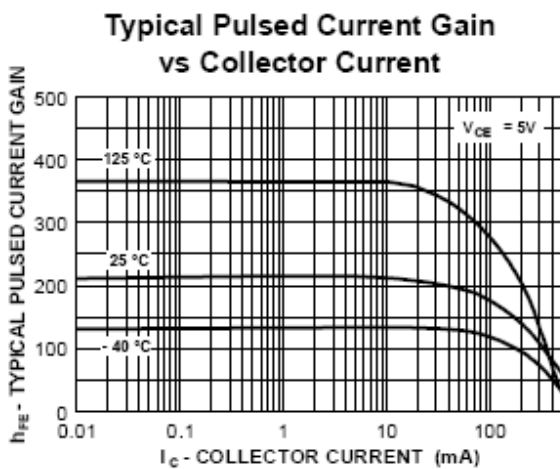
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**ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

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 $\mu A$
DC current gain	$h_{FE}$	$V_{CE}=-5V I_C=-2.0mA$	125	630	
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

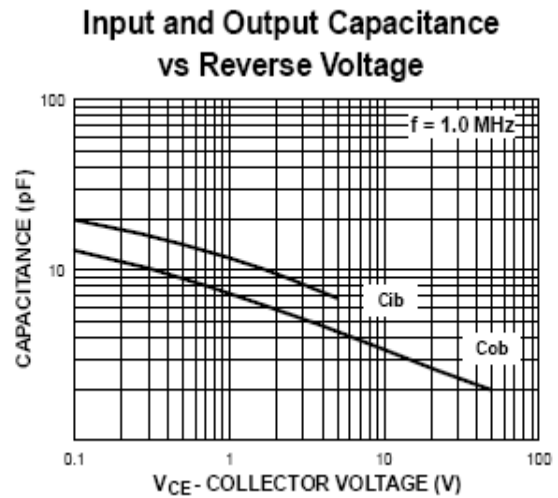
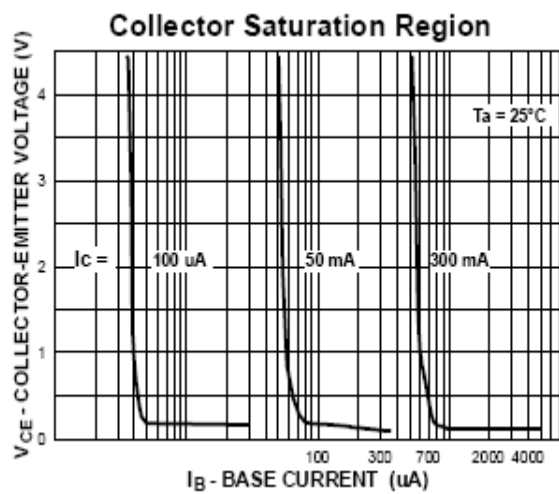
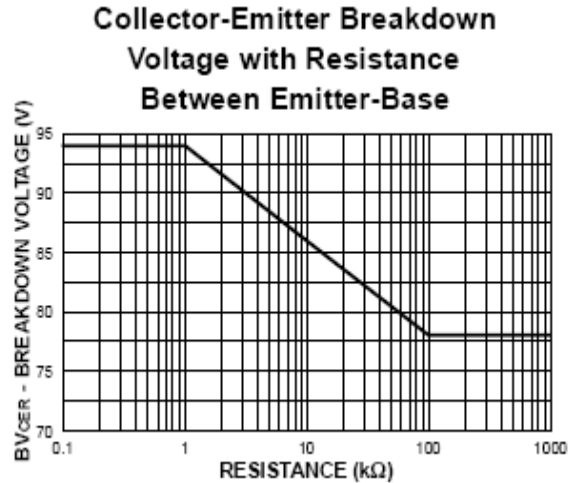
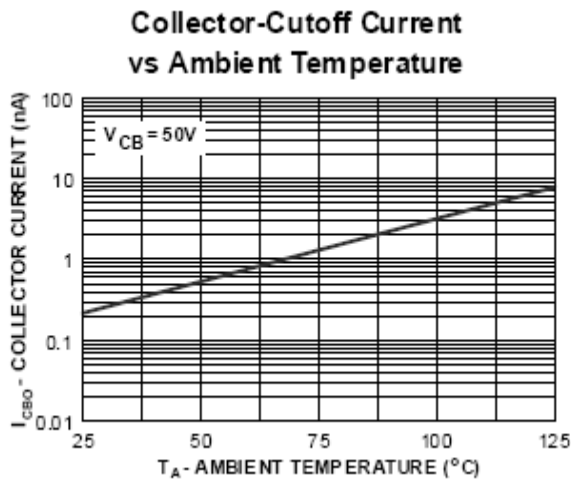
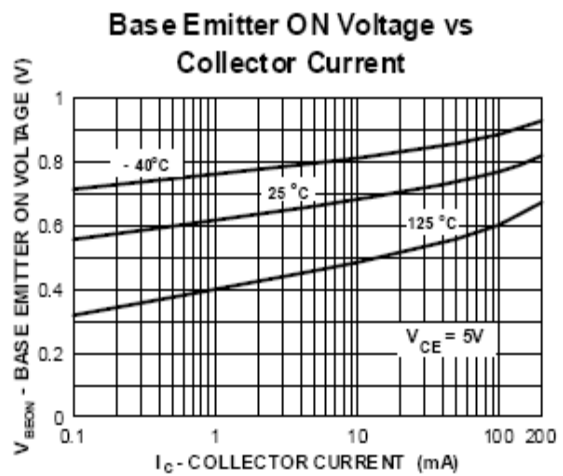
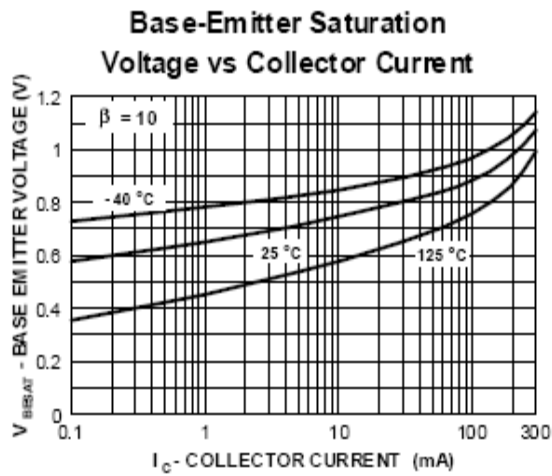
**TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**





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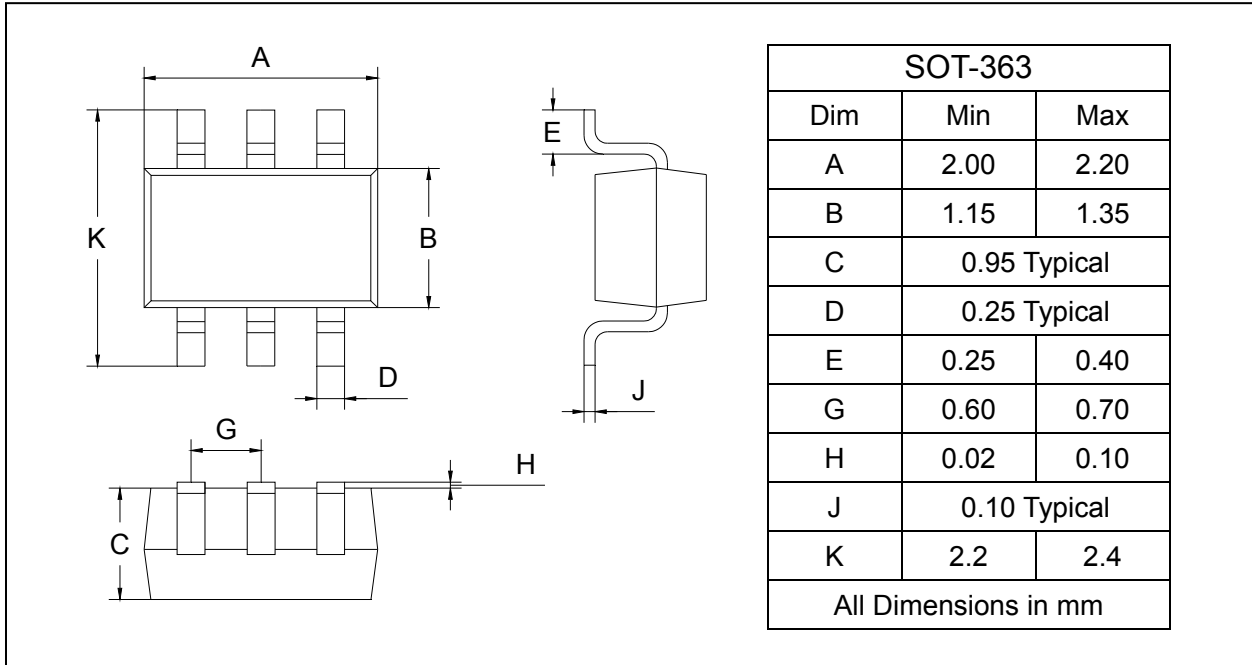
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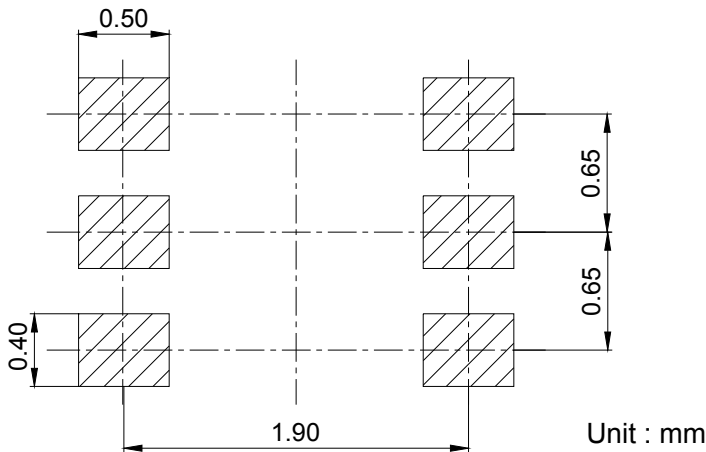
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-363



**SOLDERING FOOTPRINT**



**PACKAGE INFORMATION**

Device	Package	Shipping
BC857S	SOT-363	3000/Tape&Reel