

## Dual PNP Small Signal Surface Mount Transistor

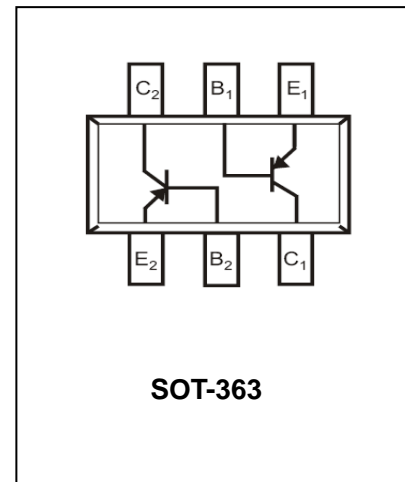
## BC857S

### 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
$V_{CBO}$	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

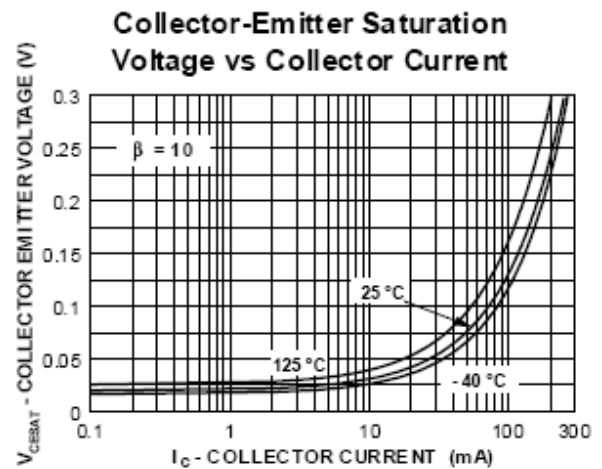
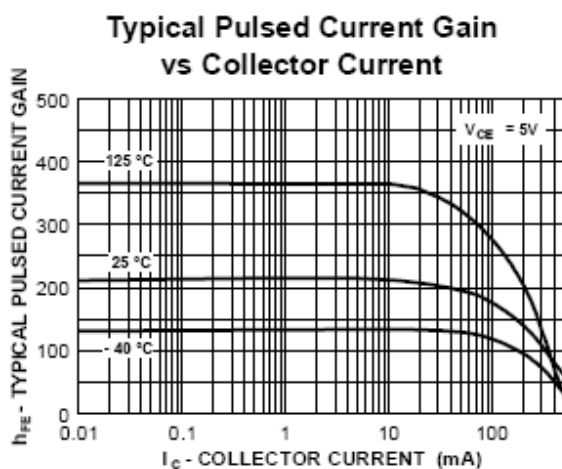
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### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

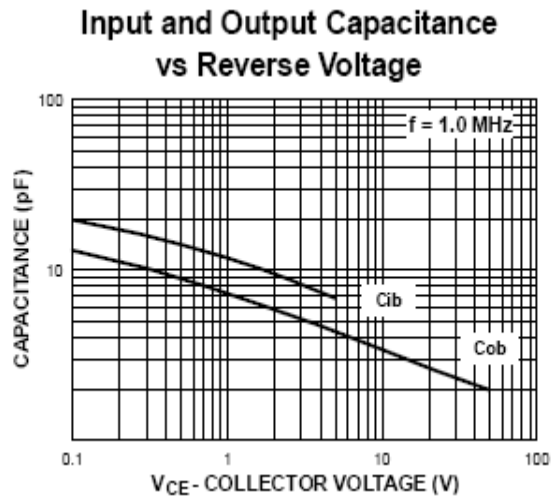
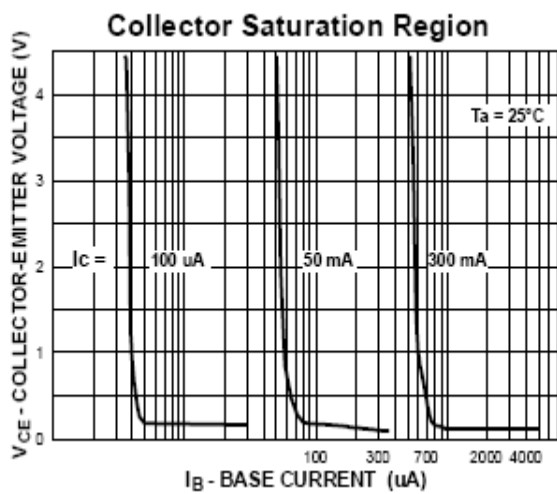
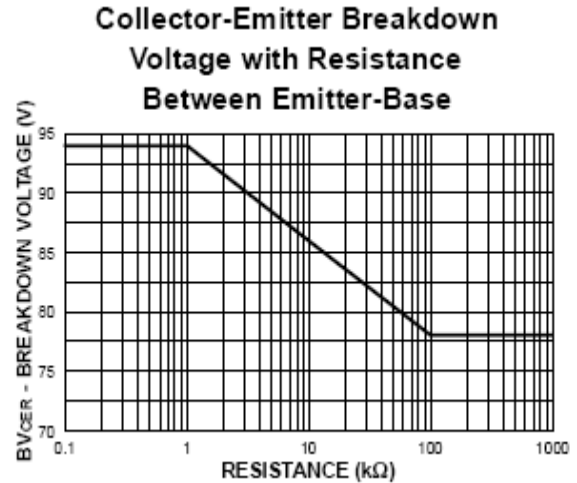
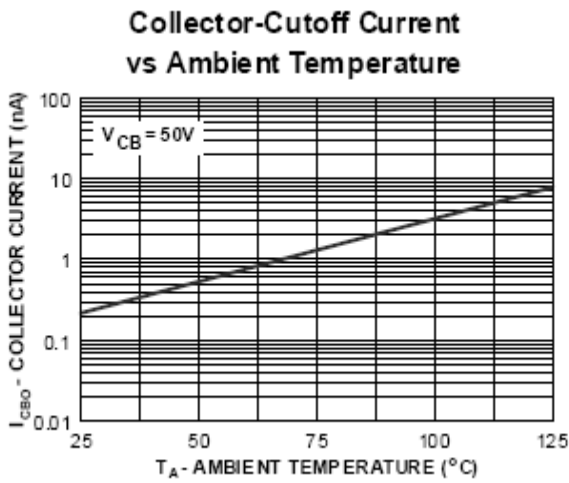
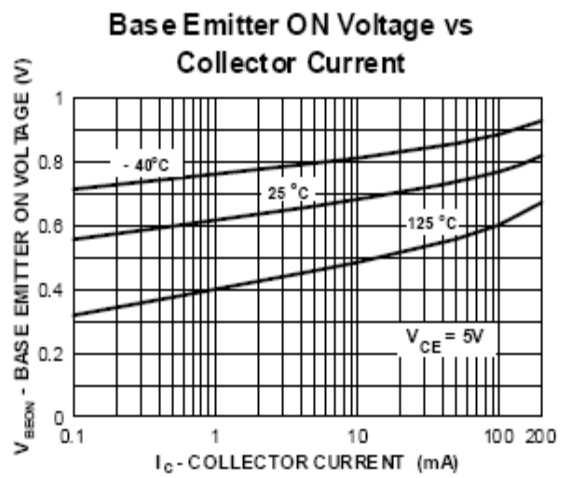
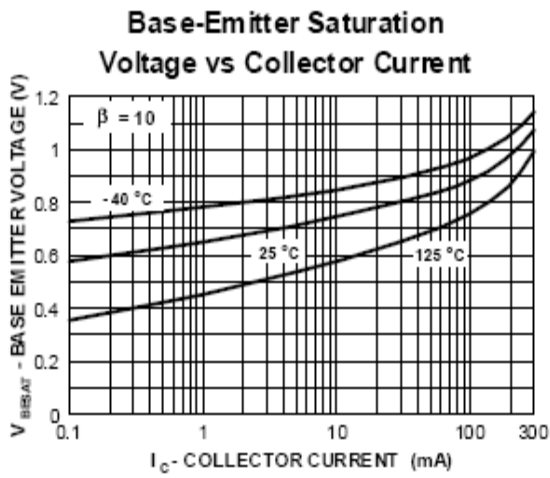
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A$ $I_E = 0$	-50	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA$ $I_B = 0$	-45	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A$ $I_C = 0$	-5	-	V
Collector cut-off 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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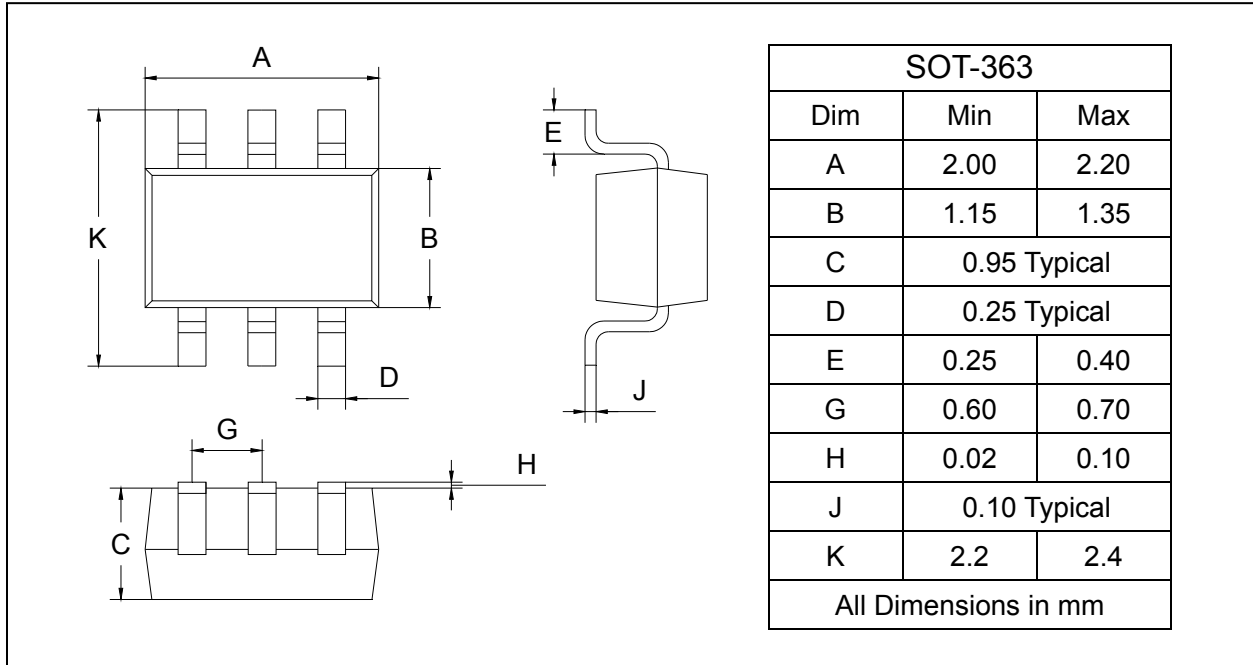
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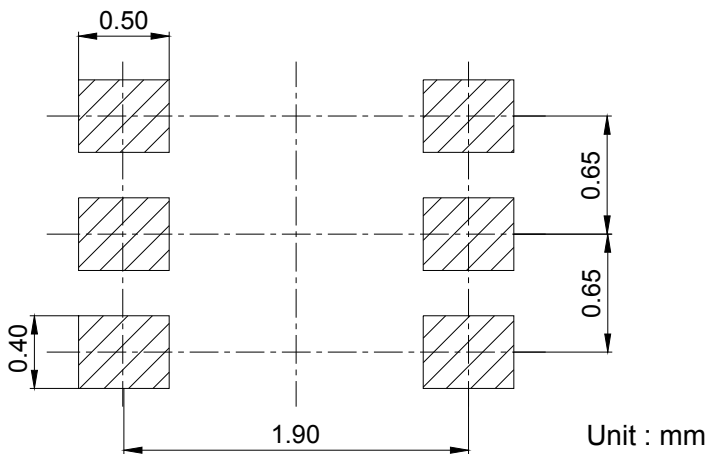
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-363



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

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