

## Dual NPN Small Signal Surface Mount Transistor

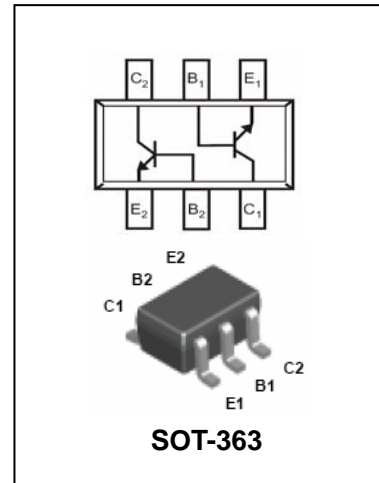
## BC847S

### FEATURES

- Epitaxial planar die construction.
- Ultra-small surface mount package.



Lead-free



### APPLICATIONS

- Dual NPN small signal surface mount transistor.

### ORDERING INFORMATION

Type No.	Marking	Package Code
BC847S	1C	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	6	V
$I_C$	Collector Current -Continuous	200	mA
$P_D$	Power Dissipation Derate above 25°C	300	mW
		2.4	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	415	°C/W
$T_j, T_{stg}$	Junction and Storage Temperature	-55 to +150	°C



**Dual NPN Small Signal Surface Mount Transistor**

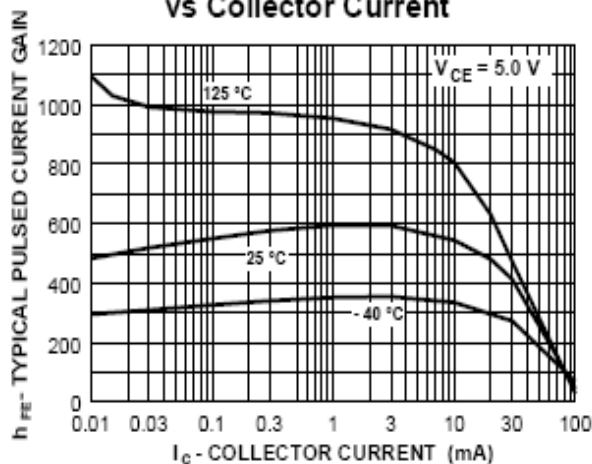
**BC847S**

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

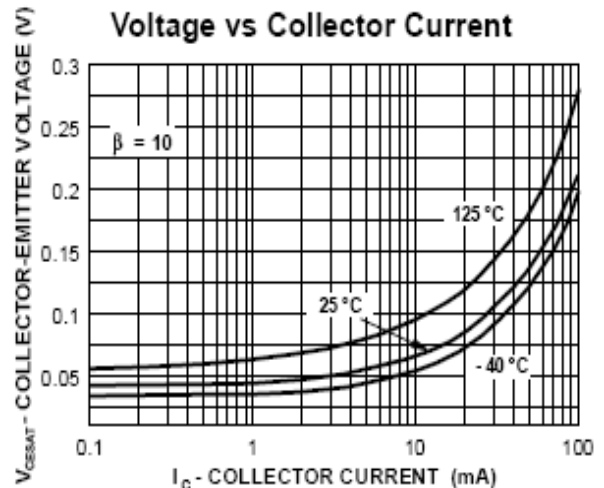
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	50	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	45	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=30V, I_E=0$ $V_{CB}=30V, I_E=0, T_A=150^\circ C$	-	15 5.0	nA $\mu A$
DC current gain	$h_{FE}$	$V_{CE}=5V, I_C=2.0mA$	110	630	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5.0mA$	-	0.25 0.65	V
Base-emitter on voltage	$V_{BE(on)}$	$I_C=2.0mA, V_{CE}=5.0V$ $I_C=10mA, V_{CE}=5.0V$	0.58 -	0.7 0.77	V
Transition frequency	$f_T$	$V_{CE}=5.0V, I_C=20mA, f=100MHz$	200		MHz
Output Capacitance	$C_{obo}$	$V_{CB}=10V, f=1.0MHz, I_E=0$	-	2	pF

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

**Typical Pulsed Current Gain vs Collector Current**



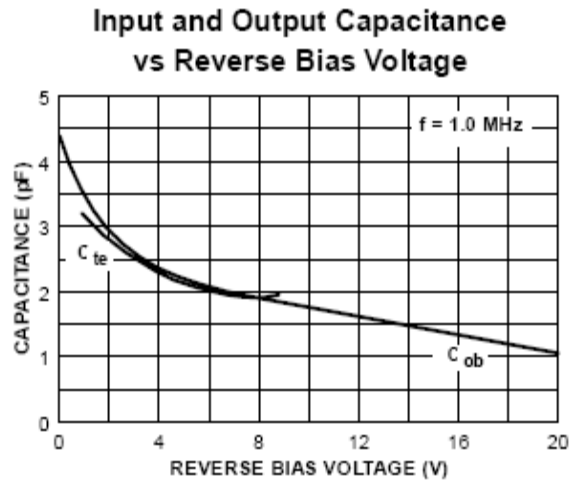
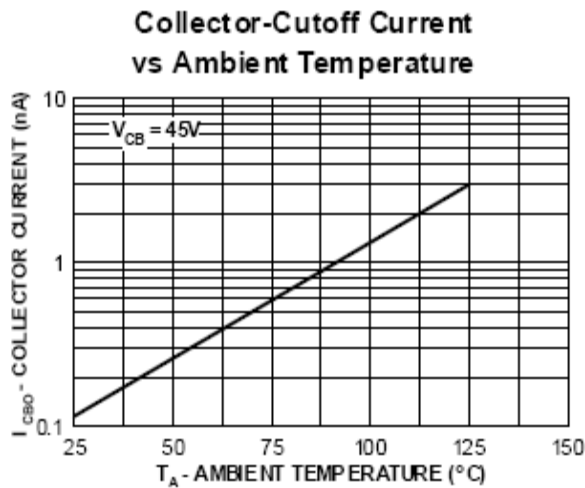
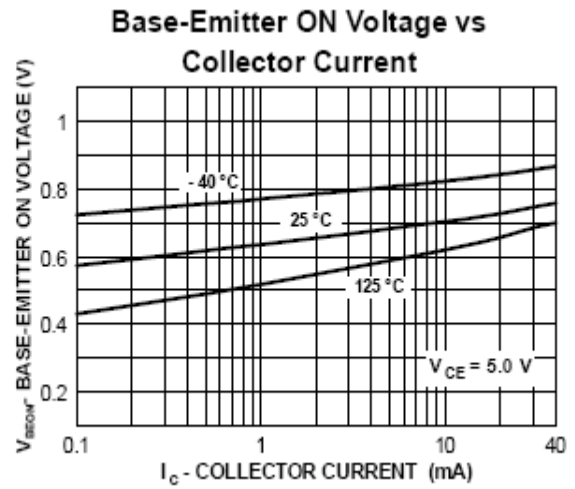
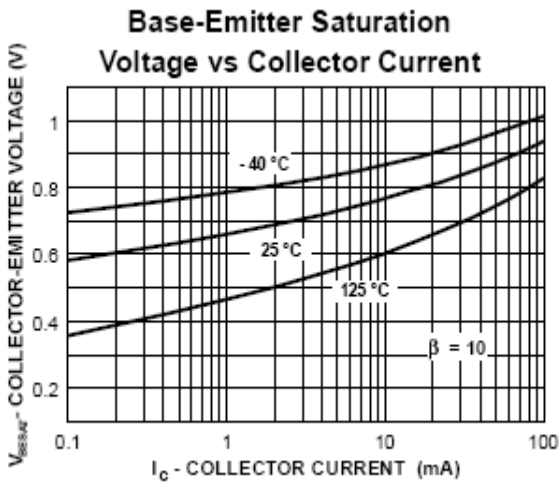
**Collector-Emitter Saturation Voltage vs Collector Current**





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BC847S



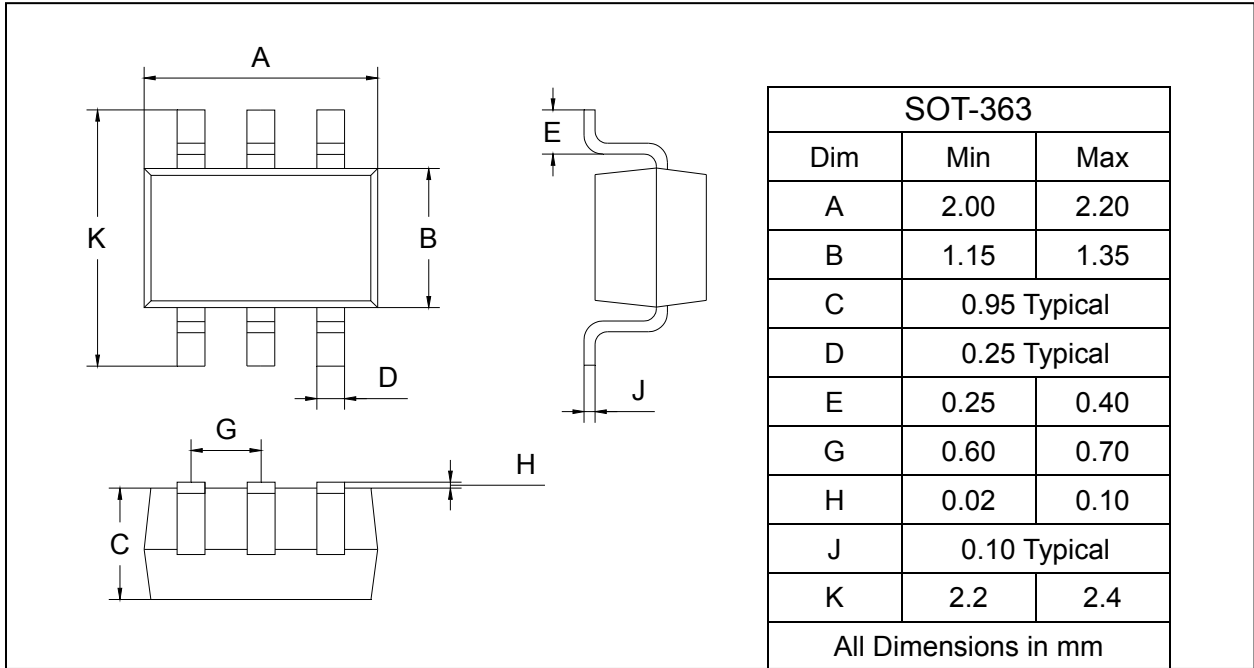
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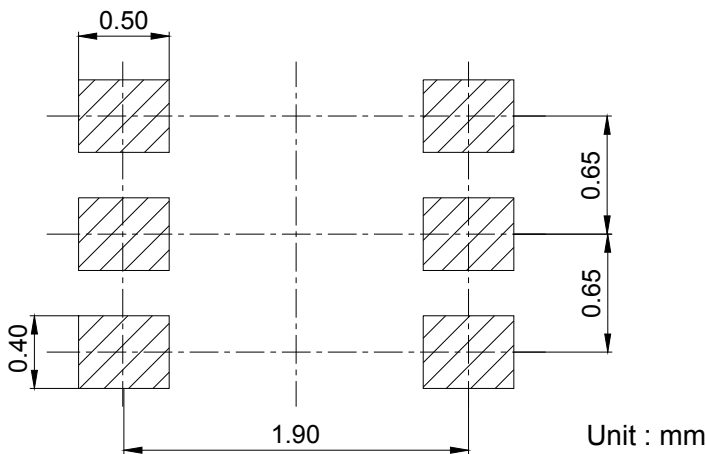
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-363



**SOLDERING FOOTPRINT**



**PACKAGE INFORMATION**

Device	Package	Shipping
BC847S	SOT-363	3000/Tape&Reel