



# BC847BS

## Dual NPN Small Signal Transistor 300mW

### Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Ideally Suited for Automatic Insertion
- Ultra-Small Surface Mount Package
- For Switching and AF Amplifier Applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking:1C

### Mechanical Data

- Case: SOT-363, Molded Plastic
- Polarity: See Diagram

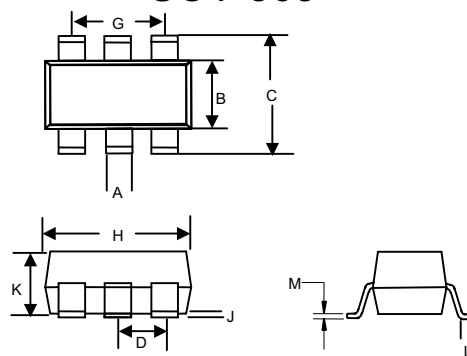
#### Maximum Ratings @ 25°C Unless Otherwise Specified

Symbol	Parameter	Value	Units
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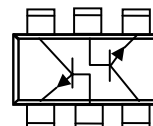
#### OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	45	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	50	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	6.0	Vdc
$I_C$	Collector Current	100	mA
$I_{CM}$	Peak Collector Current	200	mA
$P_d$	Power Dissipation @ $T_A=25^\circ C$	300	mW
$T_J, T_{STG}$	Operating & Storage Temperature	-55~+150	°C

### SOT-363



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.006	.014	0.15	0.35	
B	.045	.053	1.15	1.35	
C	.079	.096	2.00	2.45	
D	.026		0.65Nominal		
G	.047	.055	1.20	1.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.035	.043	0.90	1.10	
L	.010	.018	0.26	0.46	
M	.003	.006	0.08	0.15	

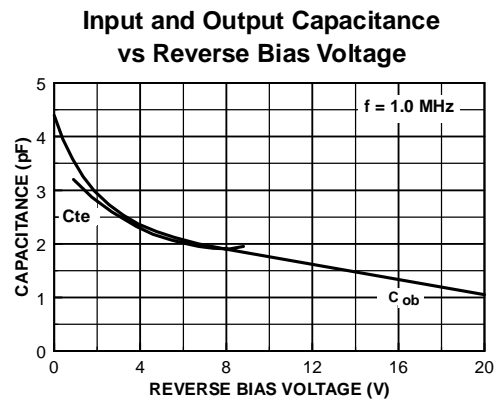
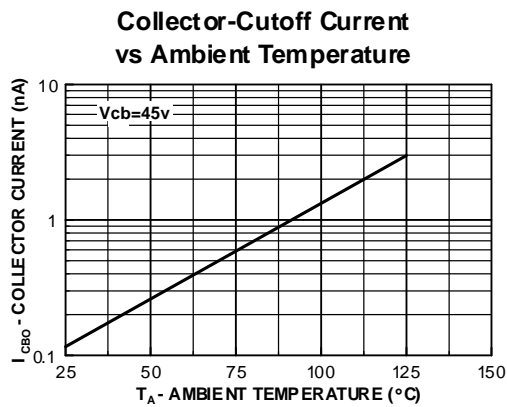
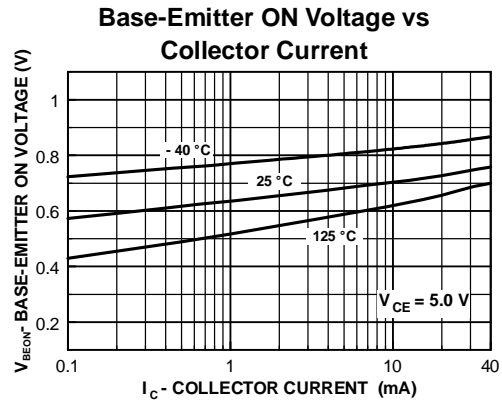
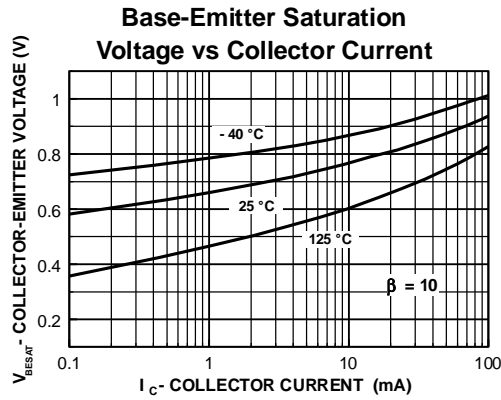
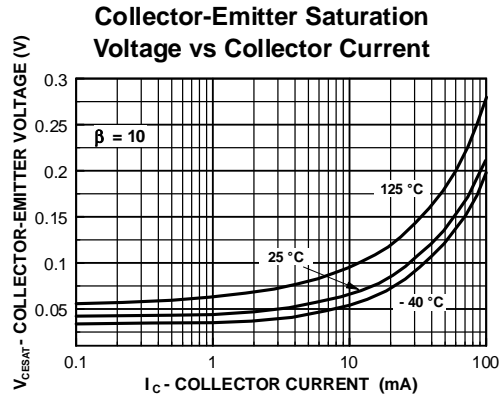
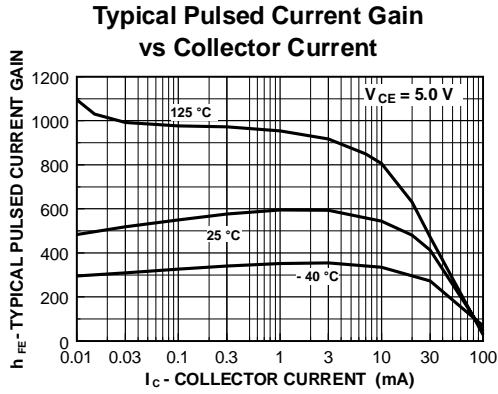


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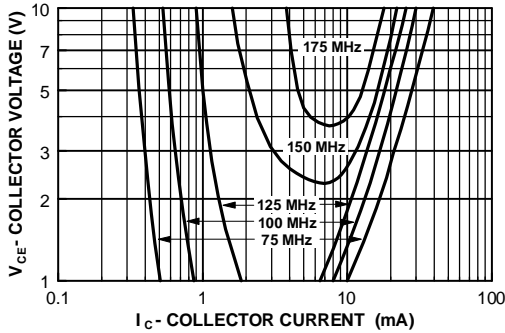
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units	Test Condition
<b>OFF CHARACTERISTICS</b>						
$h_{FE}$	DC Current Gain	200	---	450	---	$V_{CE}=5.0V, I_C=2.0mA$
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage	---	---	250 650	mV	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5.0mA$
$V_{BE(ON)}$	Base-Emitter Voltage	580	665	700	mV	$V_{CE}=5.0V, I_C=2.0mA$
$I_{CBO}$	Collector-Cutoff Current	---	---	15	nA	$V_{CB}=30V, I_E=0$
$f_T$	Gain Bandwidth Product	---	200	---	MHz	$V_{CE}=5.0V, I_C=10mA,$ $f=100MHz$
$C_{OB}$	Collector-output Capacitance	---	2	---	pF	$V_{CB}=10V, f=1.0MHz$

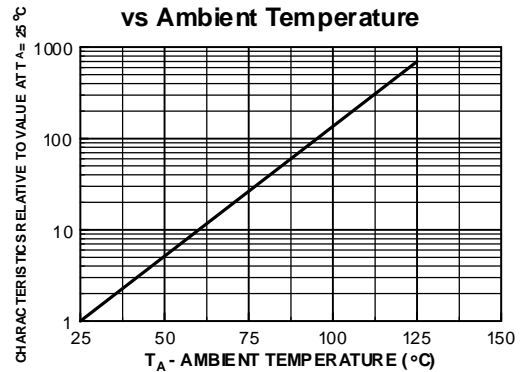
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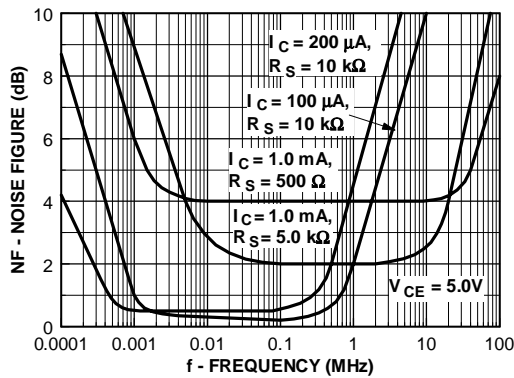
**Contours of Constant Gain Bandwidth Product ( $f_T$ )**



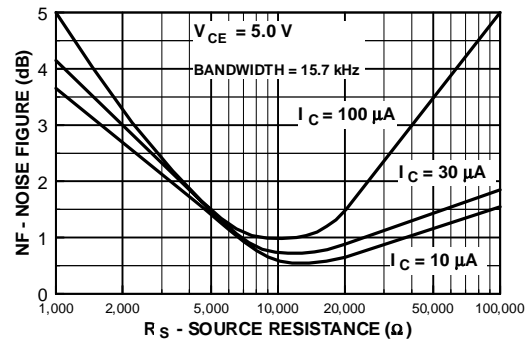
**Normalized Collector-Cutoff Current vs Ambient Temperature**



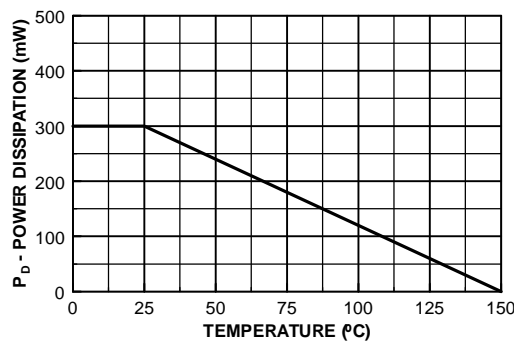
**Noise Figure vs Frequency**



**Wideband Noise Frequency vs Source Resistance**



**Power Dissipation vs Ambient Temperature**





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**Ordering Information :**

<b>Device</b>	<b>Packing</b>
Part Number-TP	Tape&Reel; 3Kpcs/Reel

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