



Micro Commercial Components



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BC857S

Features

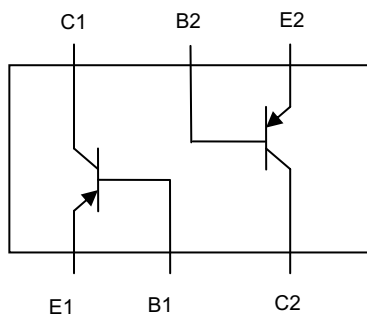
- Halogen free available upon request by adding suffix "-HF"
- # Multi-chip Transistor
- # Ultra-Small Surface Mount Package
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Mechanical Data

- # Case: SOT-363
- Marking: 3C

Maximum Ratings @ 25°C Unless Otherwise Specified

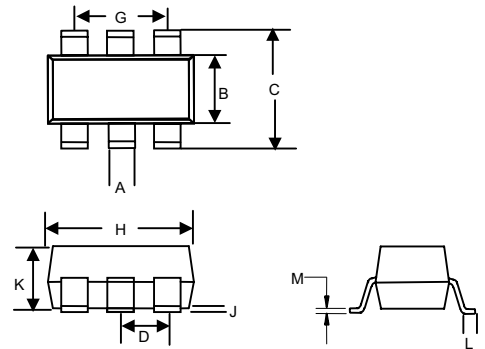
Symbol	Parameter	Value	Units
OFF CHARACTERISTICS			
I_{CM}	Peak Collector Current	-200	mA
$V(BR)CBO$	Collector-base Voltage	-50	V
P_d	Power Dissipation @ $T_A=25^\circ C$	300	mW
T_J, T_{STG}	Operating & Storage Temperature	-55~+150	°C



BC857S Structure schematic diagram

PNP Plastic-Encapsulate Transistors 300mW

SOT-363

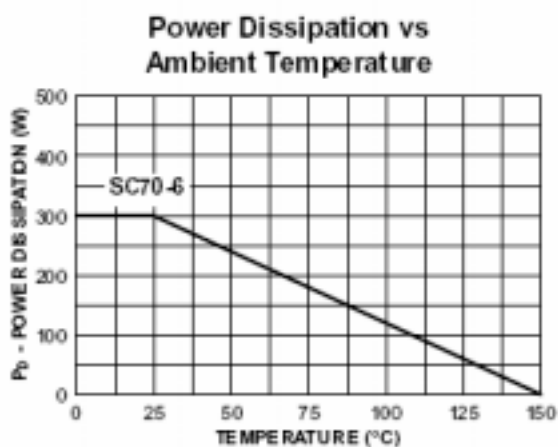
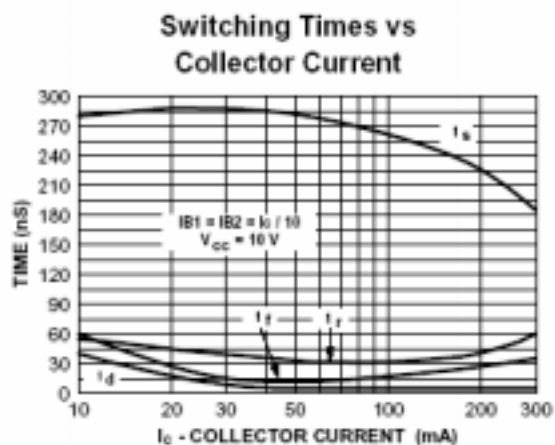
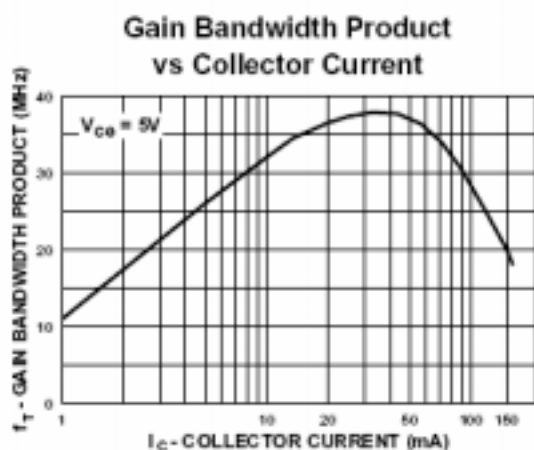
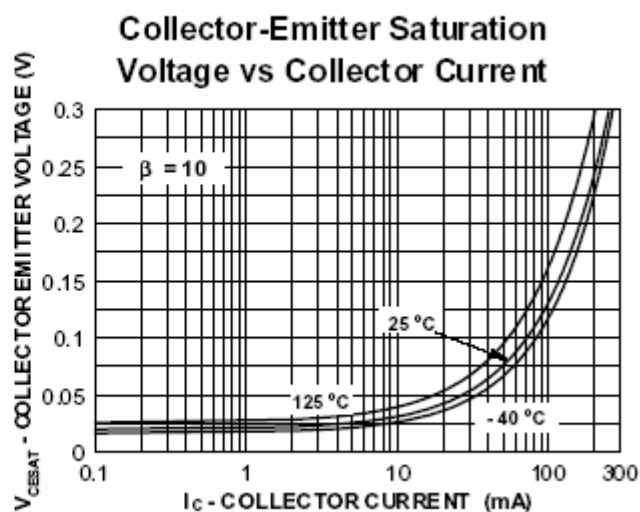
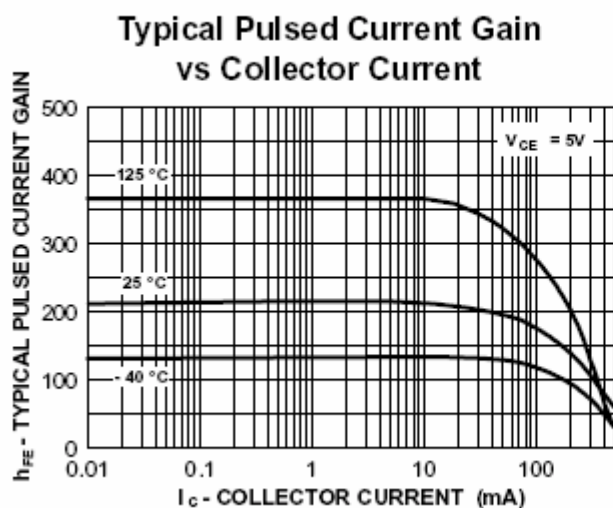


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.006	.014	0.15	0.35	
B	.045	.053	1.15	1.35	
C	.085	.096	2.15	2.45	
D	.026		0.65Nominal		
G	.047	.055	1.20	1.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.035	.043	0.90	1.10	
L	.010	.018	0.26	0.46	
M	.003	.006	0.08	0.15	

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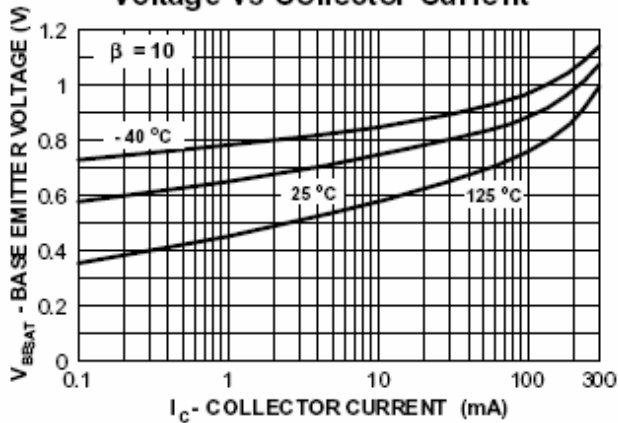
ELECTRICAL CHARACTERISTICS(Tamb=25 unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	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}	$V_{CB} = -30V, I_E = 0$			-15	nA
DC current gain	h_{FE}	$V_{CE} = -5V, I_C = -2mA$	125		630	
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C = -10mA, I_B = -0.5mA$			-0.3	V
	$V_{CE(sat)(2)}$	$I_C = -100mA, I_B = -5mA$			-0.65	V
Base-emitter voltage	$V_{BE(1)}$	$V_{CE} = -5V, I_C = -2mA$	-0.6		-0.75	V
	$V_{BE(2)}$	$V_{CE} = -5V, I_C = -10mA$			-0.82	V
Transition frequency	f_T	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		3.5		pF
Noise figure	NF	$V_{CE} = -5V, I_C = -0.2mA,$ $f = 1kHz, R_s = 2K, BW = 200Hz$		2.5		dB

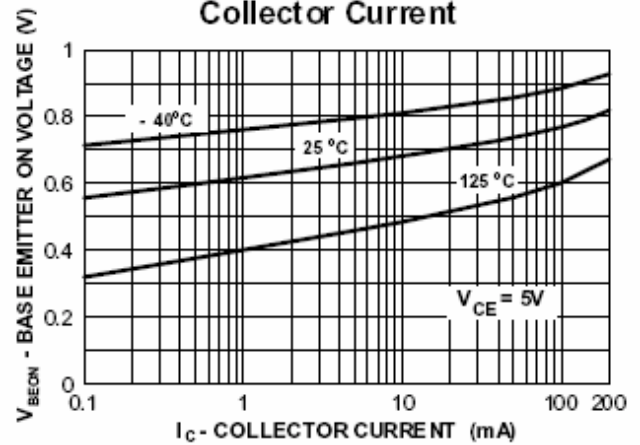


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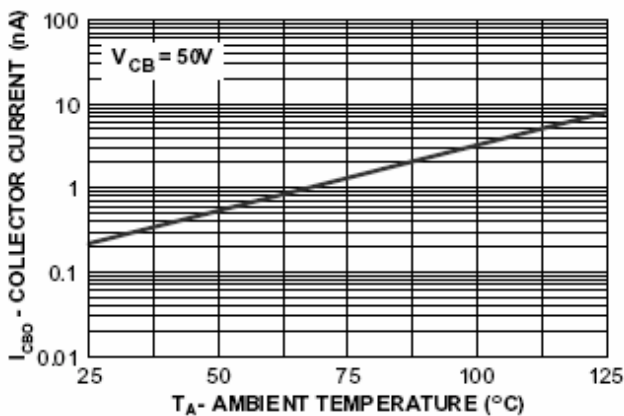
**Base-Emitter Saturation
Voltage vs Collector Current**



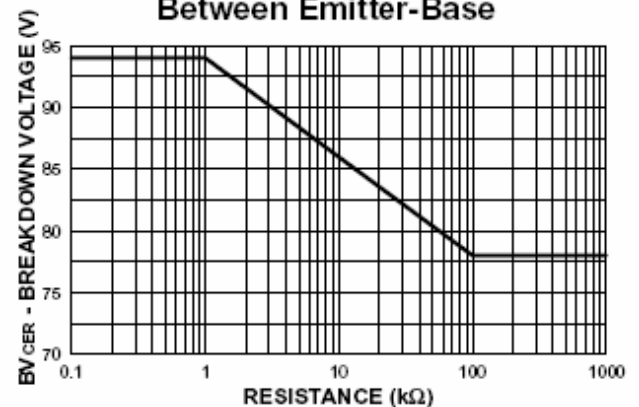
**Base Emitter ON Voltage vs
Collector Current**



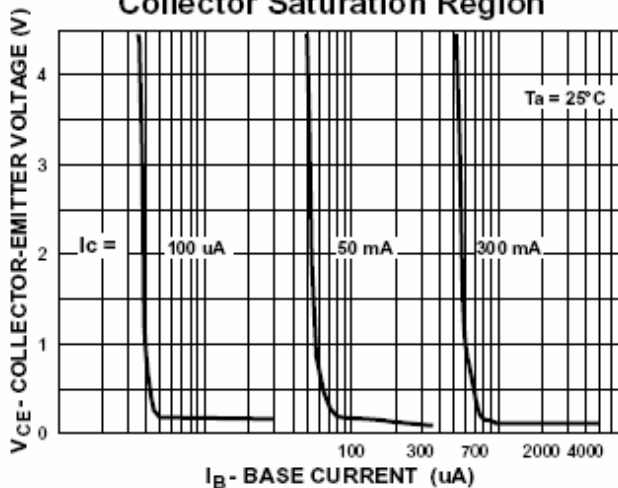
**Collector-Cutoff Current
vs Ambient Temperature**



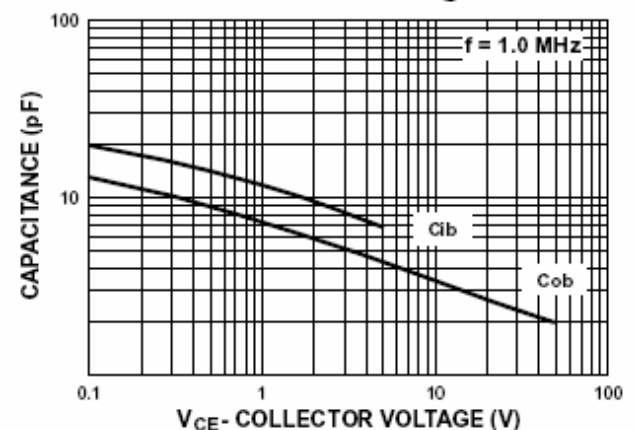
**Collector-Emitter Breakdown
Voltage with Resistance
Between Emitter-Base**



Collector Saturation Region



**Input and Output Capacitance
vs Reverse Voltage**



Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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