



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-363 Plastic-Encapsulate Transistors

BC857S Multi-Chip TRANSISTOR (PNP)

FEATURES

Power dissipation

$$P_{CM} : 300 \text{ mW}(T_{amb}=25^{\circ}\text{C})$$

Collector current

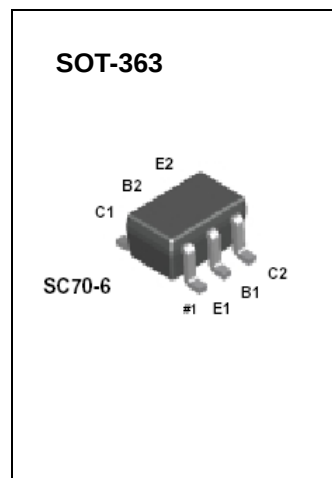
$$I_{CM} : -200 \text{ mA}$$

Collector-base voltage

$$V_{(BR)CBO} : -50 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg} : -55^{\circ}\text{C to } +150^{\circ}\text{C}$$



MARKING: 3CS

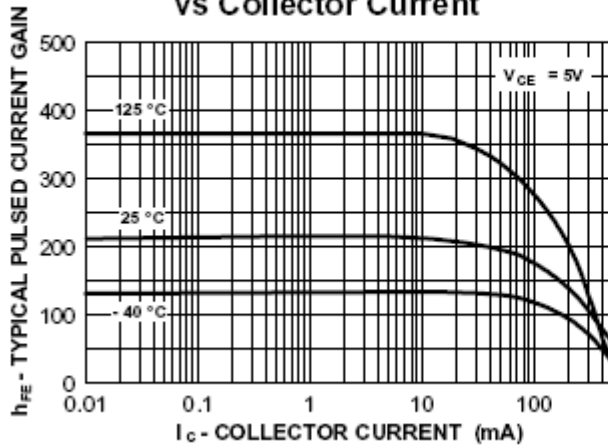
ELECTRICAL CHARACTERISTICS($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10\text{mA}, I_B=0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-30\text{V}, I_E=0$			-15	nA
DC current gain	h_{FE}	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	125		630	
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$			-0.3	V
	$V_{CE(sat)(2)}$	$I_C=-100\text{mA}, I_B=-5\text{mA}$			-0.65	V
Base-emitter voltage	$V_{BE(1)}$	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	-0.6		-0.75	V
	$V_{BE(2)}$	$V_{CE}=-5\text{V}, I_C=-10\text{mA}$			-0.82	V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$		3.5		pF
Noise figure	NF	$V_{CE}=-5\text{V}, I_C=-0.2\text{mA}, f=1\text{kHz}, R_s=2\text{K}\Omega, BW=200\text{Hz}$		2.5		dB

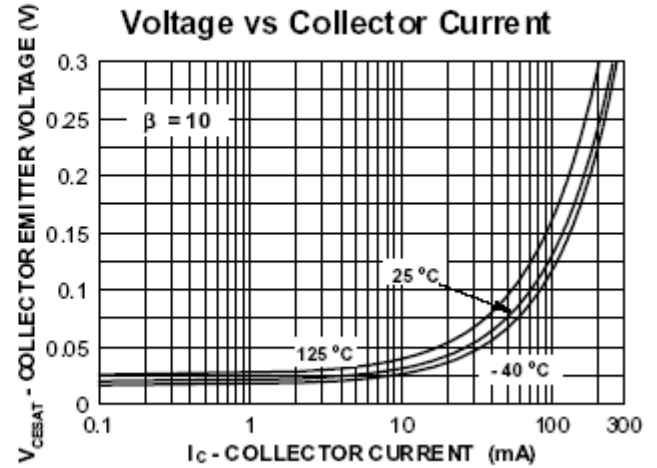
Typical Characteristics

BC857S

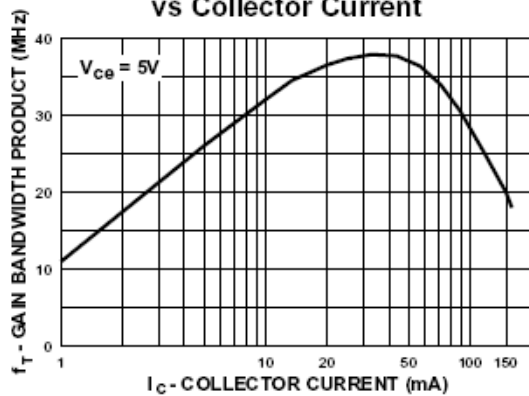
Typical Pulsed Current Gain
vs Collector Current



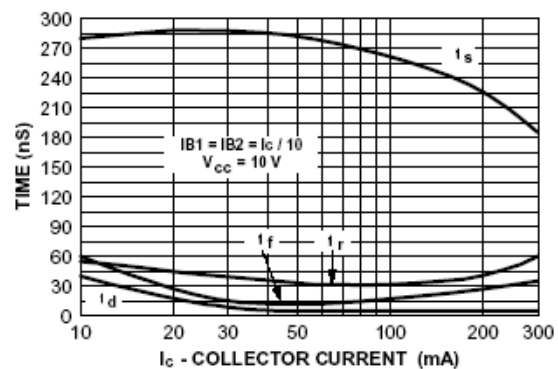
Collector-Emitter Saturation
Voltage vs Collector Current



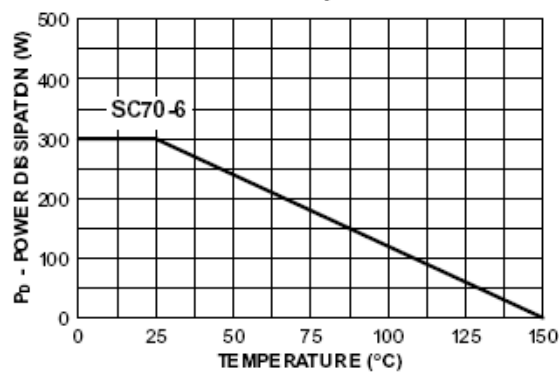
Gain Bandwidth Product
vs Collector Current



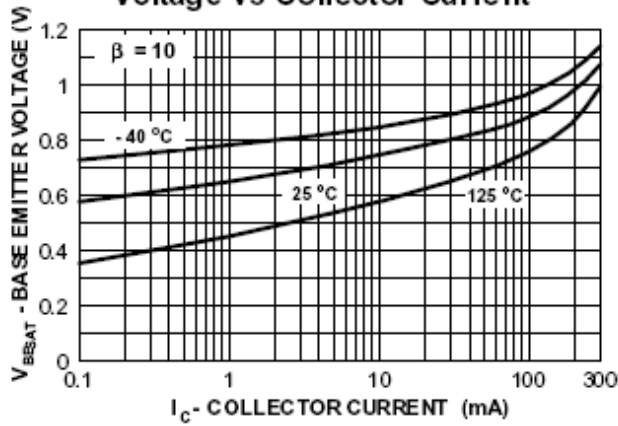
Switching Times vs
Collector Current



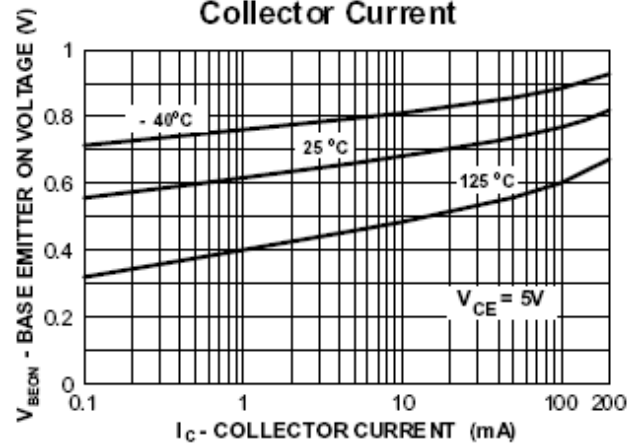
Power Dissipation vs
Ambient Temperature



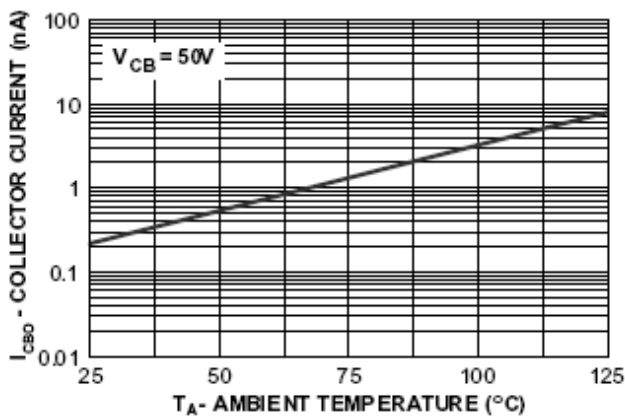
Base-Emitter Saturation Voltage vs Collector Current



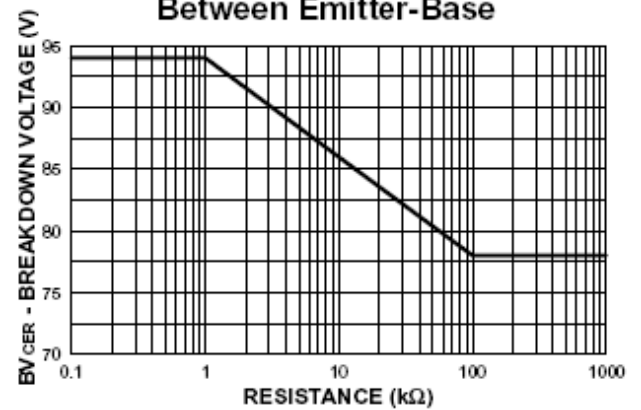
Base Emitter ON Voltage vs Collector Current



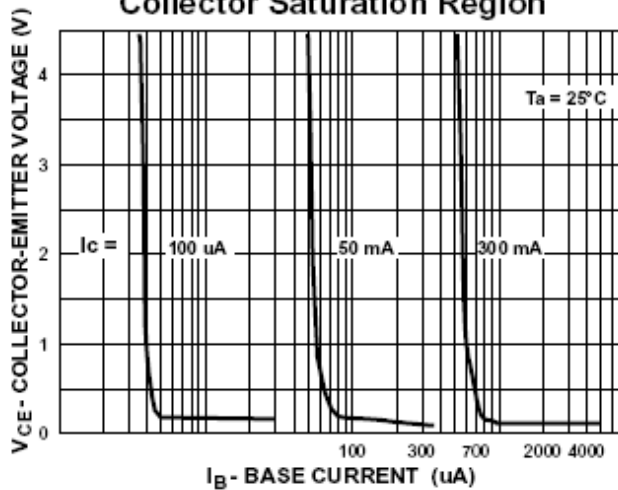
Collector-Cutoff Current vs Ambient Temperature



Collector-Emitter Breakdown Voltage with Resistance Between Emitter-Base



Collector Saturation Region



Input and Output Capacitance vs Reverse Voltage

