



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

## SOT-23 Plastic-Encapsulate Transistors

**SS8050** TRANSISTOR (NPN)

### FEATURES

Complimentary to SS8550

MARKING: Y1

MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$  unless otherwise noted)



Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	1.5	A
$P_C$	Collector Power Dissipation	0.3	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1\text{mA}, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=40\text{V}, I_E=0$			0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CB}=20\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=1\text{V}, I_C=100\text{mA}$	120		400	
	$h_{FE(2)}$	$V_{CE}=1\text{V}, I_C=800\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=800\text{mA}, I_B=80\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=800\text{mA}, I_B=80\text{mA}$			1.2	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}$ $f=30\text{MHz}$	100			MHz

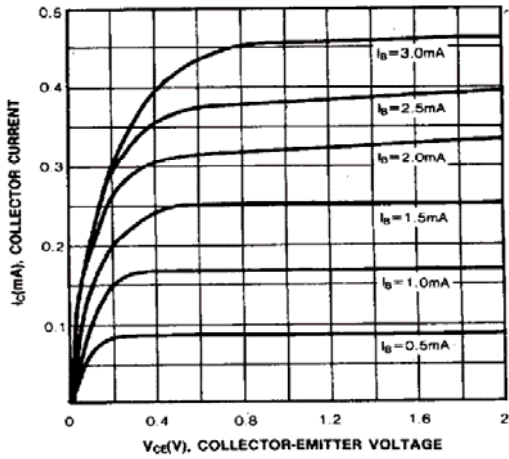
CLASSIFICATION OF  $h_{FE(1)}$

Rank	L	H	J
Range	120-200	200-350	300-400

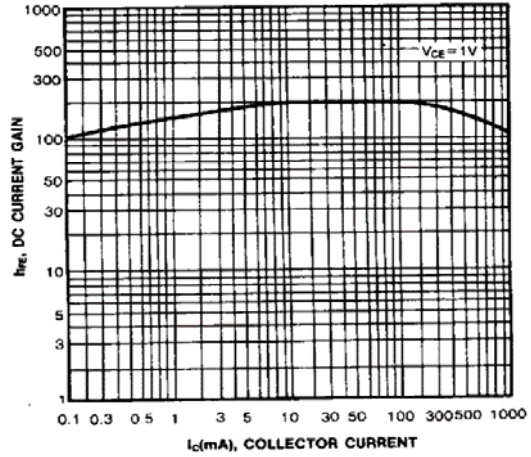
# Typical Characteristics

SS8050

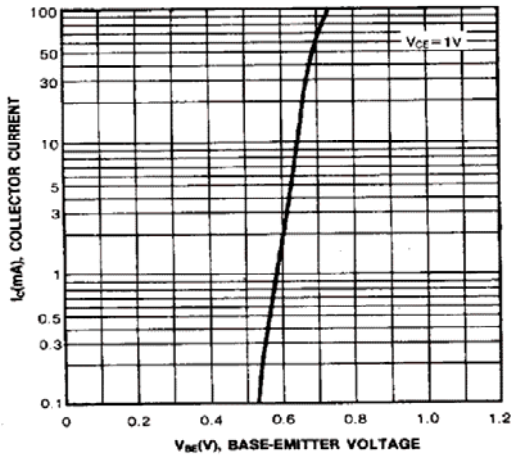
STATIC CHARACTERISTIC



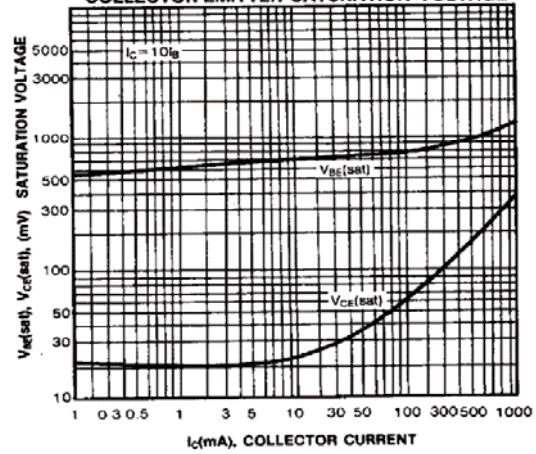
DC CURRENT GAIN



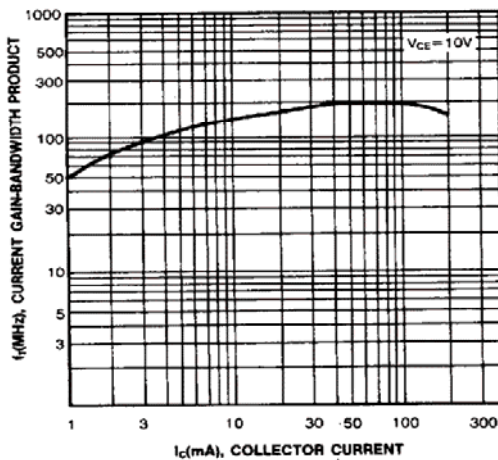
BASE-EMITTER ON VOLTAGE



BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR OUTPUT CAPACITANCE

