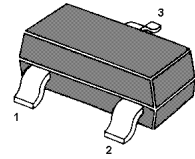


## S8050 TRANSISTOR (NPN)

### FEATURES

- Complimentary to S8550
- Collector Current:  $I_C=0.5A$



### MARKING: J3Y

SOT-23-3L Plastic Package

### MAXIMUM RATINGS ( $T_A=25^\circ C$ 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	0.5	A
$P_C$	Collector Dissipation	0.3	W
$T_j$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55-150	$^\circ C$

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

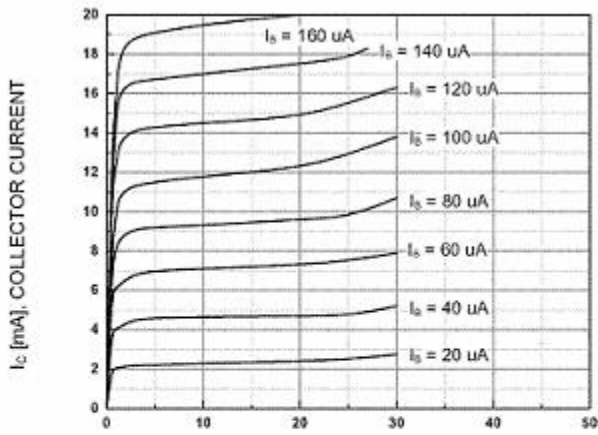
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=40V, I_E=0$			0.1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CB}=20V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC current gain	$H_{FE(1)}$	$V_{CE}=1V, I_C=50mA$	120		400	
	$H_{FE(2)}$	$V_{CE}=1V, I_C=500mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.2	V
Transition frequency	$f_T$	$V_{CE}=6V, I_C=20mA$ $f=30MHz$	150			MHz

### CLASSIFICATION OF $h_{FE(1)}$

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

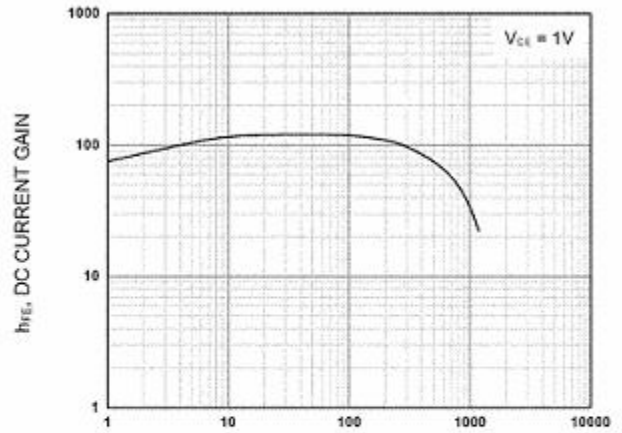
## Typical Characteristics

## S8050



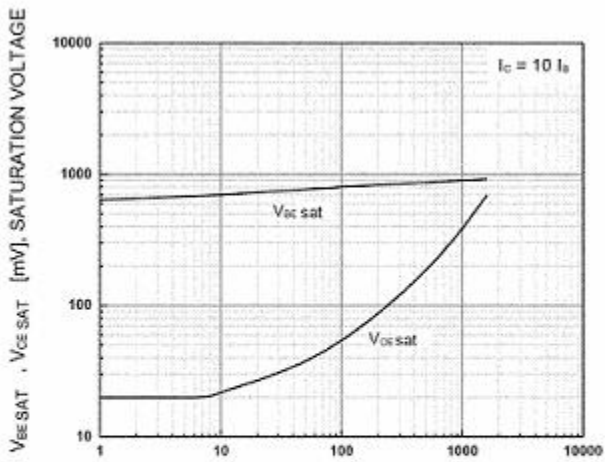
$V_{CE}$  [V], COLLECTOR-EMITTER VOLTAGE

Static Characteristic



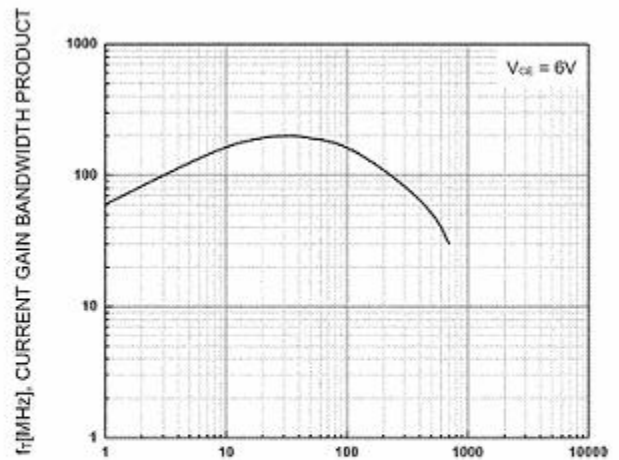
$I_c$  [mA], COLLECTOR CURRENT

DC current Gain



$I_c$  [mA], COLLECTOR CURRENT

Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

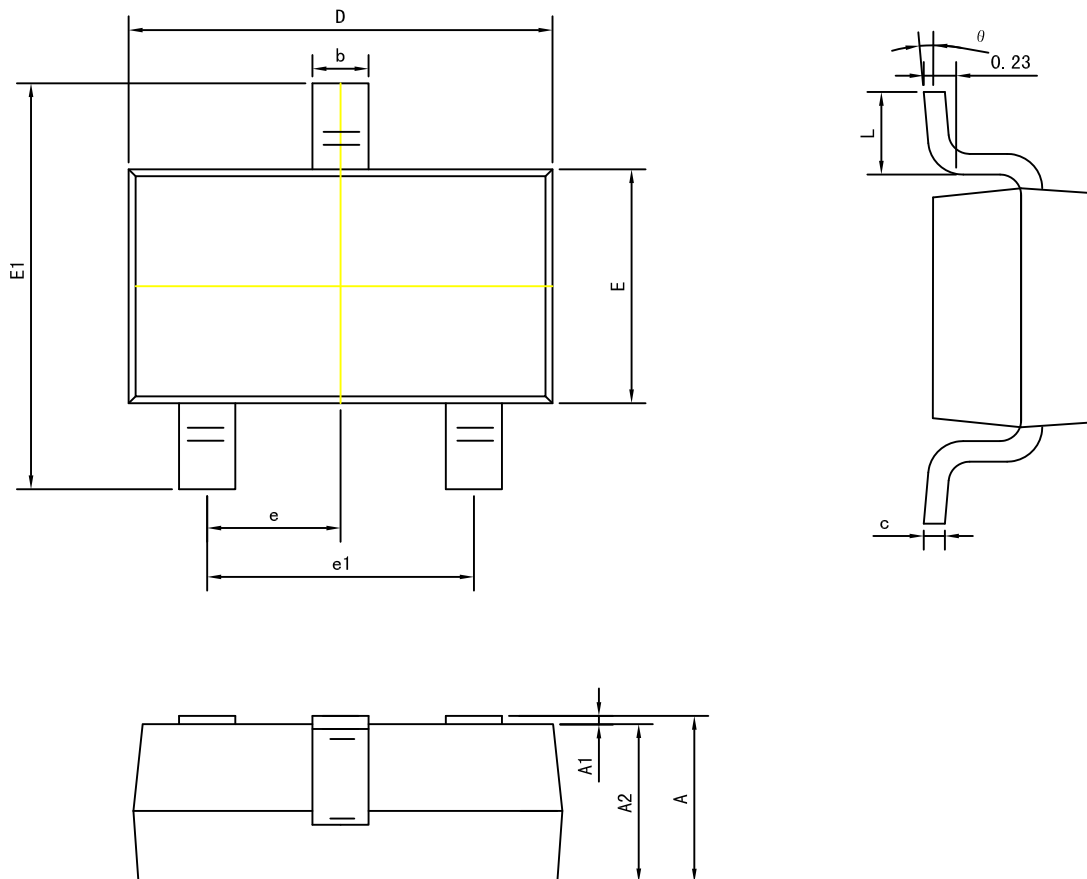


$I_c$  [mA], COLLECTOR CURRENT

Current Gain Bandwidth Product

Package outline dimensions

SOT23-3L



Symbol	Dimension in Millimeters		
	Min	Typ	Max
A	1.050	1.150	1.250
A1	0.000	0.050	0.100
A2	1.050	1.100	1.150
b	0.300	0.400	0.500
c	0.100	0.150	0.200
D	2.820	2.920	3.020
E	1.500	1.600	1.700
E1	2.650	2.800	2.950
e	0.950 (Basic)		
e1	1.800	1.900	2.000
L	0.300	-	0.600
θ	0°	-	8°