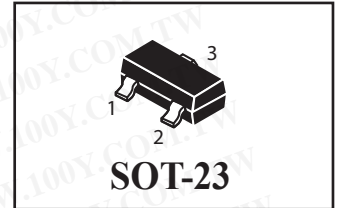
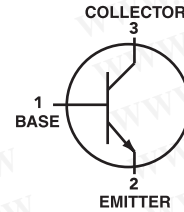


### NPN General Purpose Transistors

**(Pb)** Lead(Pb)-Free



#### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	25	Vdc
Collector-Base Voltage	$V_{CBO}$	40	Vdc
Emitter-Base Voltage	$V_{EBO}$	6.0	Vdc
Collector Current-Continuous	$I_C$	1500	mAdc

#### THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (1) $T_A=25^{\circ}\text{C}$ Derate above $25^{\circ}\text{C}$	$P_D$	225	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	1.8	$\text{mW}/^{\circ}\text{C}$
Total Device Dissipation Alumina Substrate, (2) $T_A=25^{\circ}\text{C}$ Derate above $25^{\circ}\text{C}$	$P_D$	625	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	5.0	$\text{mW}/^{\circ}\text{C}$
Junction and Storage, Temperature	$T_J, T_{stg}$	200	$^{\circ}\text{C/W}$
		-55 to +150	$^{\circ}\text{C}$

#### DEVICE MARKING

SS8050LT1=Y1

#### ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
-----------------	--------	-----	-----	------

#### OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ( $I_C=0.1\text{ mAdc}, I_B=0$ )	$V_{(BR)CEO}$	25	-	Vdc
Collector-Base Breakdown Voltage ( $I_C=100\text{ }\mu\text{Adc}, I_E=0$ )	$V_{(BR)CBO}$	40	-	Vdc
Emitter-Base Breakdown Voltage ( $I_E=100\text{ }\mu\text{Adc}, I_C=0$ )	$V_{(BR)EBO}$	6.0	-	Vdc
Collector Cutoff Current ( $V_{CE}=20\text{ Vdc}, I_E=0$ )	$I_{CEO}$	-	0.1	$\mu\text{Adc}$
Collector Cutoff Current ( $V_{CB}=40\text{ Vdc}, I_E=0$ )	$I_{CBO}$	-	0.1	$\mu\text{Adc}$
Emitter Cutoff Current ( $V_{EB}=5.0\text{ Vdc}, I_C=0$ )	$I_{EBO}$	-	0.1	$\mu\text{Adc}$

1.FR-5=1.0 x 0.75 x 0.062 in

2.Alumina=0.4 x 0.3 x 0.024 in. 99.5% alumina

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-54151736  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

# SS8050LT1



## ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted) (Continued)

Characteristics	Symbol	Min	Max	Unit
-----------------	--------	-----	-----	------

## ON CHARACTERISTICS

DC Current Gain ( $I_C=100\text{ mAdc}, V_{CE}=1.0\text{ Vdc}$ ) ( $I_C=800\text{ mAdc}, V_{CE}=1.0\text{ Vdc}$ )	$h_{FE(1)}$ $h_{FE(2)}$	120 40	350 -	- -
Collector-Emitter Saturation Voltage ( $I_C=800\text{ mAdc}, I_B=80\text{ mAdc}$ )	$V_{CE(sat)}$	-	0.5	Vdc
Base-Emitter Saturation Voltage ( $I_C=800\text{ mAdc}, I_B=80\text{ mAdc}$ )	$V_{BE(sat)}$	-	1.2	Vdc

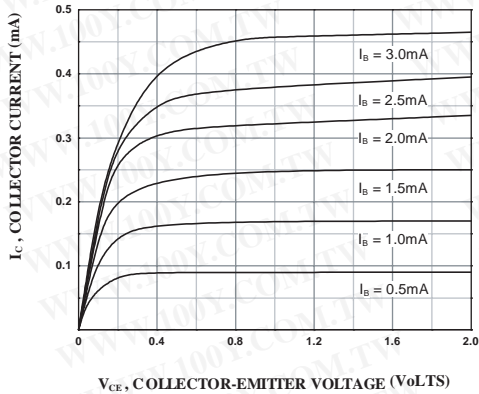
## SMALL-SIGNAL CHARACTERISTICS

Current-Gain-Bandwidth Product ( $I_C=50\text{ mAdc}, V_{CE}=10\text{ Vdc}, f=30\text{ MHz}$ )	$f_T$	100	-	MHz
---------------------------------------------------------------------------------------------------	-------	-----	---	-----

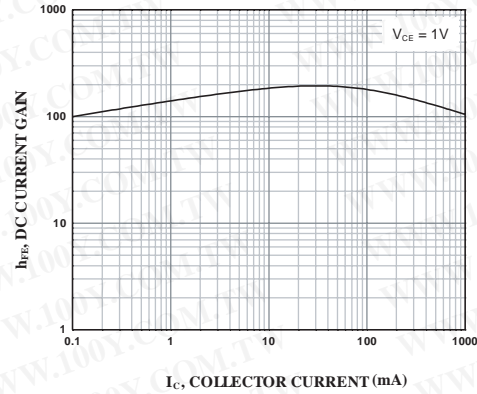
## CLASSIFICATION OF $h_{FE(1)}$

Rank	L	H
Range	120-200	200-350

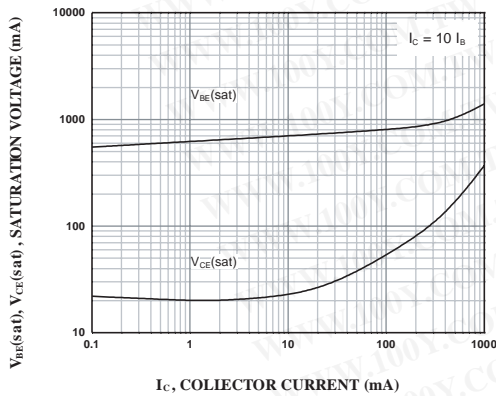
勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-54151736  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)



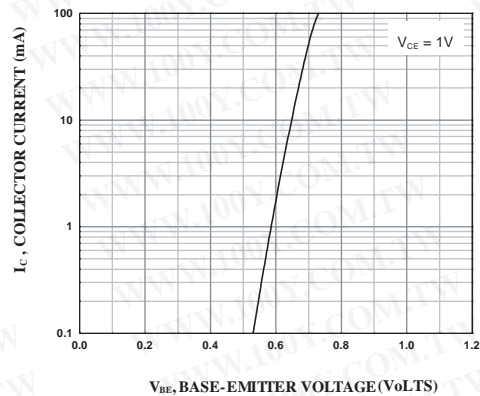
**FIG.1 Static Characteristic**



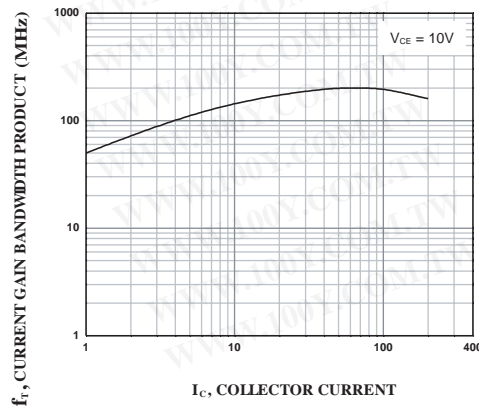
**FIG.2 DC Current Gain**



**FIG.3 Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**



**FIG.4 Base-Emitter On Voltage**



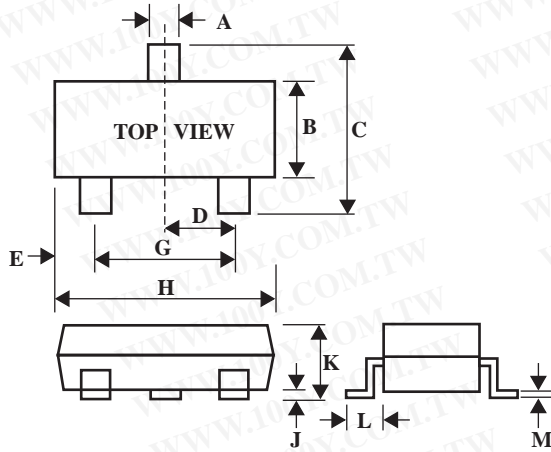
**FIG.5 Current Gain Bandwidth Product**

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-54151736  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

# SS8050LT1

# WEITRON

## SOT-23 Outline Dimension



SOT-23		
Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-54151736  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

WEITRON

<http://www.weitron.com.tw>