

GSTSS8050

NPN General Purpose Transistor


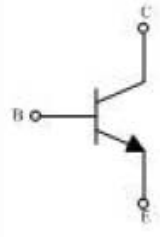
Product Description

This device is designed as a general purpose amplifier and switch.

Features

- Collector-Emitter Voltage : 25V
- Collector Current : 1.5A
- Lead(Pb)-Free

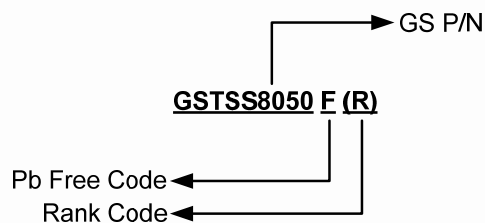
Packages & Pin Assignments

TO-92	
	
	
Pin	Description
1	Emitter
2	Base
3	Collector

Marking Information

P/N	Package	Rank	Part Marking
GSTSS8050F	TO-92	(B) / (C) / (D) / (E)	SS8050

Ordering Information



Part Number	Package	Quantity
GSTSS8050F(B or C or D or E)	TO-92	1000 PCS

Absolute Maximum Ratings

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

Symbol	Conditions	Typical	Unit
V_{CEO}	Collector-Emitter Voltage	25	V
V_{CBO}	Collector-Base Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5	V
$I_{C(DC)}$	Collector Current (DC)	1.5	A
P_D	Total Device Dissipation $T_A=25^\circ\text{C}$	1.0	W
T_J	Junction Temperature Range	-55 to +150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$

Electrical Characteristics

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

Symbol	Conditions	Min	TYP	Max	Unit
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=0.1\text{mA}$, $I_B=0\text{mA}$)	25	-	-	V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=100\mu\text{A}$, $I_E=0\text{mA}$)	40	-	-	V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=100\mu\text{A}$, $I_C=0\text{mA}$)	5	-	-	V
I_{CEO}	Collector-Emitter Cutoff Current ($V_{CE}=20\text{V}$, $I_B=0\text{mA}$)	-	-	0.1	μA
I_{CBO}	Collector-Base Cutoff Current ($V_{CB}=40\text{V}$, $I_E=0\text{mA}$)	-	-	0.1	μA
I_{EBO}	Emitter-Base Cutoff Current ($V_{EB}=5\text{V}$, $I_C=0\text{mA}$)	-	-	0.1	μA
$h_{FE(1)}$	DC Current Gain ($I_C=100\text{mA}$, $V_{CE}=1\text{V}$)	85	-	400	-
$h_{FE(2)}$	DC Current Gain ($I_C=800\text{mA}$, $V_{CE}=1\text{V}$)	40	-	-	-
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=800\text{mA}$, $I_B=80\text{mA}$)	-	-	0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=800\text{mA}$, $I_B=80\text{mA}$)	-	-	1.2	V
$V_{BE(ON)}$	Base-Emitter ON Voltage ($I_C=10\text{mA}$, $V_{CE}=1\text{V}$)	-	-	1	V
f_T	Transition Frequency ($I_C=50\text{mA}$, $V_{CE}=10\text{V}$, $f=30\text{MHz}$)	100	-	-	MHz

Classification of $h_{FE(1)}$

Rank	B	C	D	E
Range	85-160	120-200	160-300	300-400

Typical Performance Characteristics

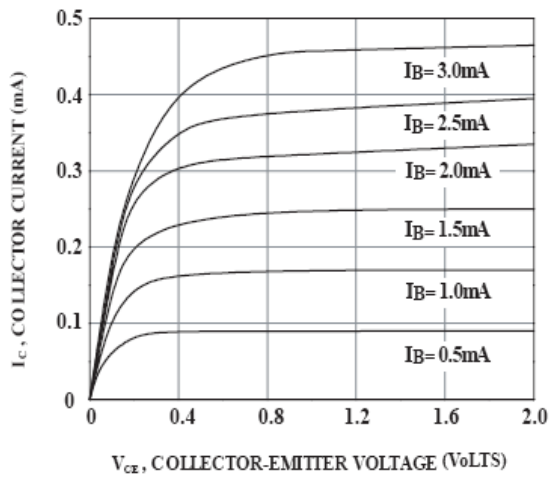


FIG.1 Static Characteristic

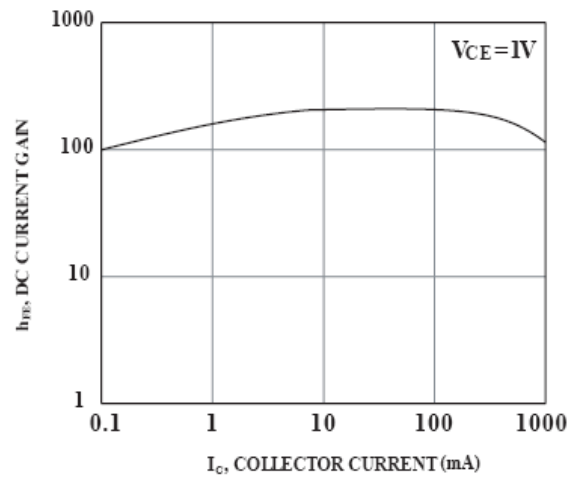


FIG.2 DC Current Gain

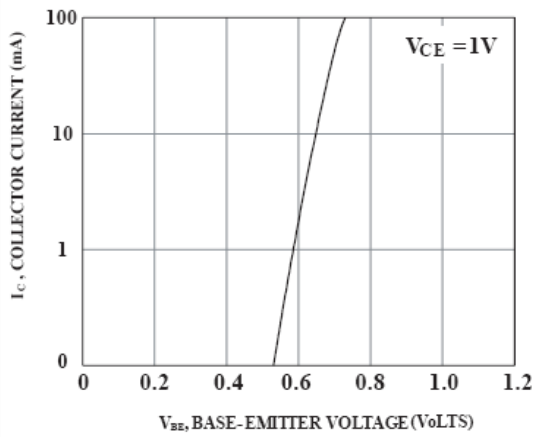
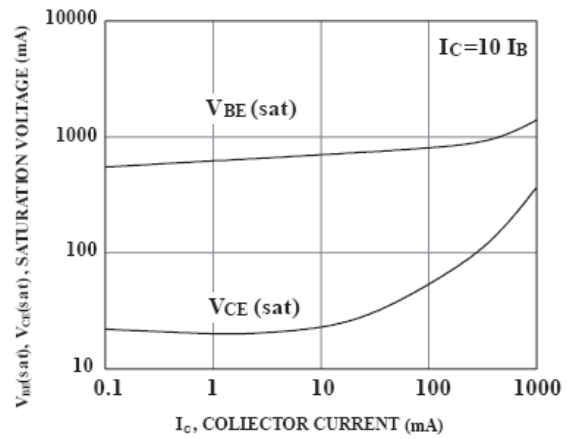


FIG.3 Base-Emitter On Voltage



**FIG.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**

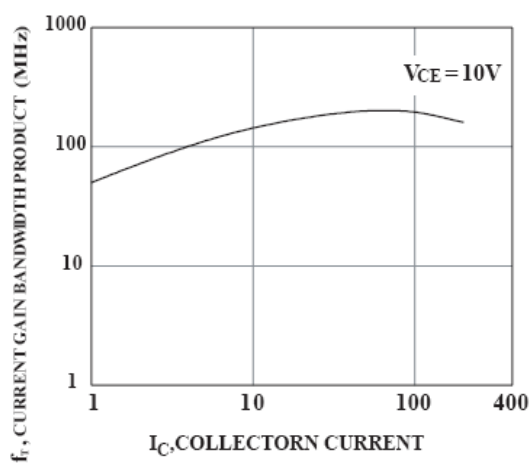


FIG.5 Current Gain Bandwidth Product

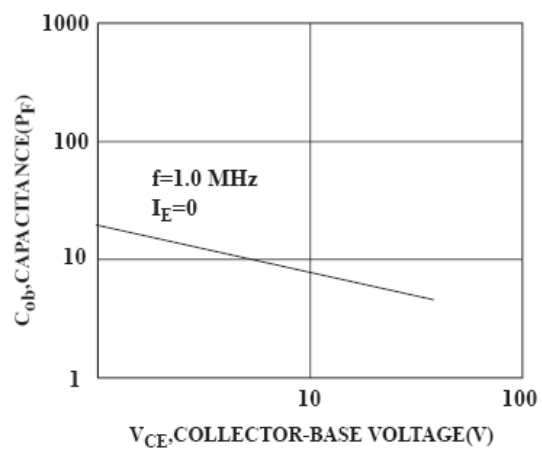
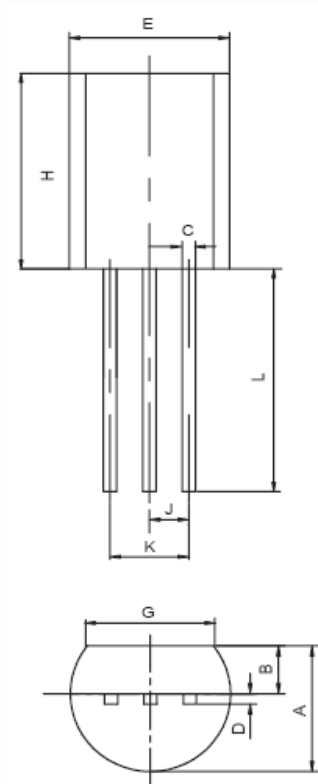


FIG.6 Collector Output Capacitance

Package Dimension

TO-92







Dimensions





Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	3.30	3.70	0.13	0.15
B	1.10	1.40	0.04	0.06
C	0.38	0.55	0.015	0.022
D	0.36	0.51	0.014	0.020
E	4.40	4.70	0.173	0.185
G	3.43	-	0.135	-
H	4.30	4.70	0.169	0.185
J	1.270(TYP)		0.050(TYP)	
K	2.44	2.64	0.096	0.104
L	14.10	14.50	0.555	0.571



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