

GSTSS8050

NPN General Purpose Transistor


Product Description

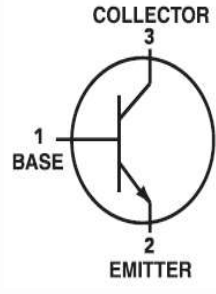
This device is designed as a general purpose amplifier and switch.

Features

- High Collector Current = 1.5A
- Complementary to GSTSS8550
- RoHS compliant
- Terminals: Solderable per MIL-STD-202, method 208

Packages & Pin Assignments

SOT-23	
	
Pin	Description
1	Base
2	Emitter
3	Collector



Ordering and Marking Information

Part Number	Package	h_{FE} Range	Marking	Quantity
GSTSS8050F-L	SOT-23	120-200	Y1	3000 PCS
GSTSS8050F-H	SOT-23	200-350	Y1	3000 PCS

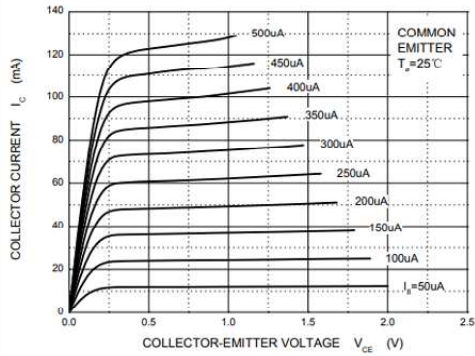
Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Symbol	Parameter	Rating	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)	1500	mA
P _D	Power Dissipation T _A =25°C	300	mW
R _{θJA}	Thermal Resistance, Junction to Ambient	417	°C/W
T _J	Junction Temperature Range	150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

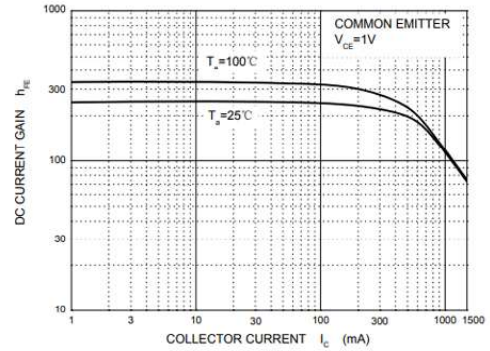
Electrical Characteristics (T_A=25°C unless otherwise noted)

Symbol	Description	Conditions	Min	Max	Unit
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C =0.1mA, I _B =0mA	25	-	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C =0.1mA, I _E =0mA	40	-	V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E =0.1mA, I _C =0mA	5	-	V
I _{CBO}	Collector Cutoff Current	V _{CB} =40V, I _E =0mA	-	100	nA
I _{EBO}	Emitter Cutoff Current	V _{EB} =5V, I _C =0mA	-	100	nA
I _{CEO}	Collector-Emitter Cutoff Current	V _{CE} =20V, I _B =0mA	-	100	nA
h _{FE}	DC Current Gain (L Suffix)	I _C =100mA, V _{CE} =1V	120	200	-
	DC Current Gain (H Suffix)	I _C =100mA, V _{CE} =1V	200	350	-
	DC Current Gain	I _C =800mA, V _{CE} =1V	40	-	-
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C =800mA, I _B =80mA	-	0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C =800mA, I _B =80mA	-	1.2	V
f _T	Transition Frequency	V _{CE} =10V, I _C =50mA, f=30MHz	100	-	MHz

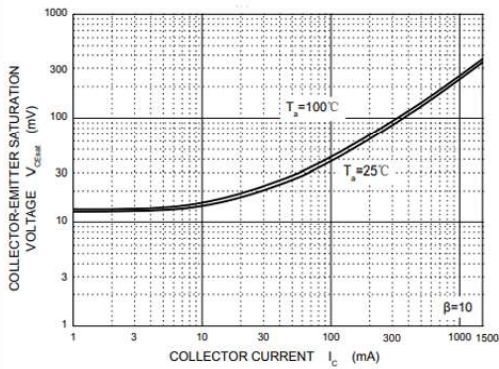
Typical Performance Characteristics (T_A=25°C unless otherwise noted)



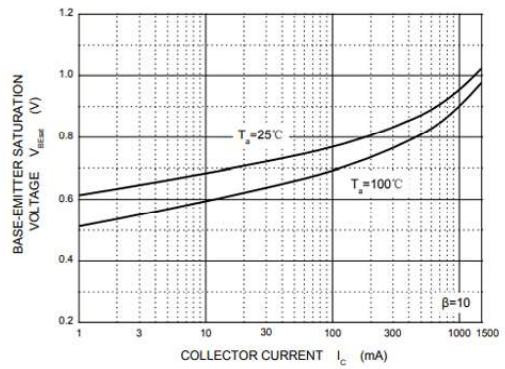
Static Characteristic



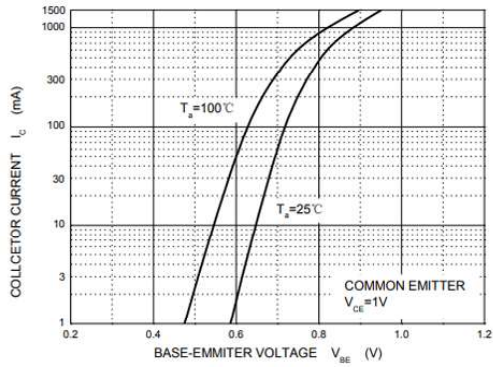
$h_{FE} - I_C$



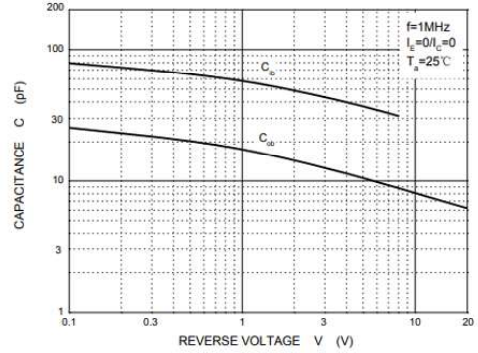
$V_{CESAT} - I_C$



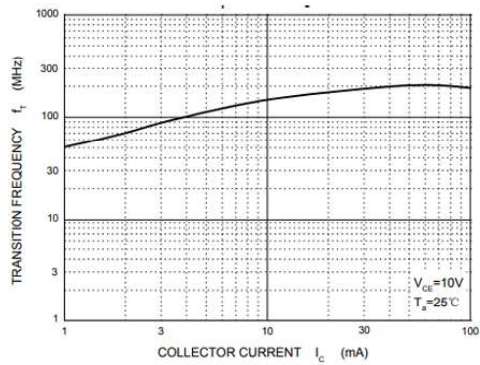
$V_{BESAT} - I_C$



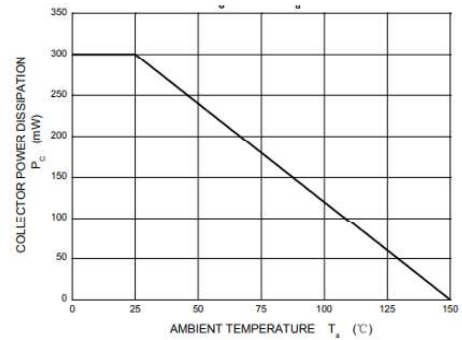
$V_{BE} - I_C$



$C_{ob}/C_{ib} - V_{CB}/V_{EB}$



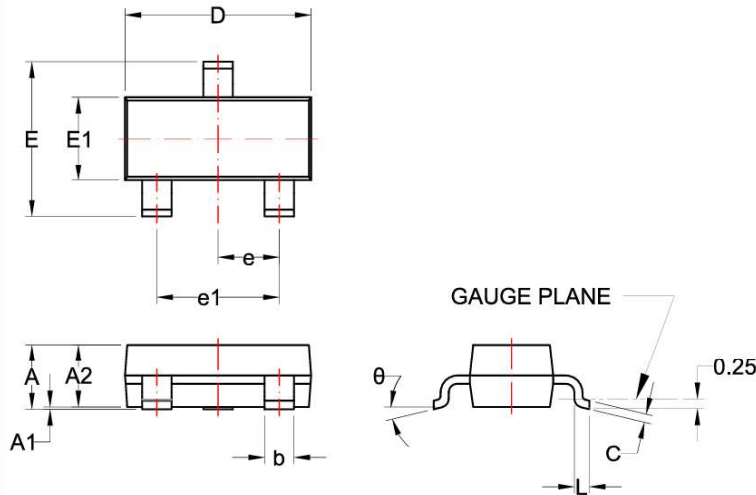
$f_T - I_C$



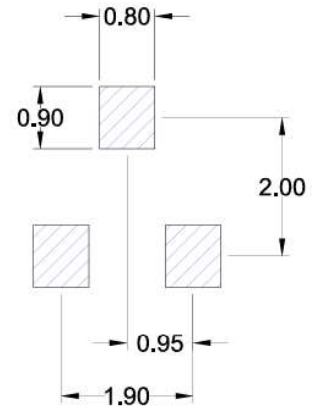
$P_C - T_a$

SOT-23 (TO-236)

Package Dimension



Recommended Land Pattern



Dimensions





Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.75	1.17	0.030	0.046
A1	0.01	0.15	0.000	0.006
A2	0.70	1.02	0.028	0.040
b	0.30	0.50	0.012	0.020
c	0.08	0.20	0.003	0.008
D	2.80	3.04	0.110	0.120
E	2.10	2.64	0.083	0.104
E1	1.20	1.40	0.047	0.055
e	0.95 BSC		0.037 BSC	
e1	1.90 BSC		0.075 BSC	
L	0.30	0.60	0.012	0.024
θ	0°	8°	0°	8°



NOTE: DIMENSION D DOES NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS. MOLD FLASH, PROTRUSIONS OR GATE BURRS SHALL NOT EXCEED 0.25mm PER INTERLEAD FLASH OR PROTRUSION SHALL NOT EXCEED 0.25mm PER SIDE.

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