

# GSTM882

## NPN Epitaxial Planar Transistors

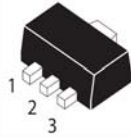
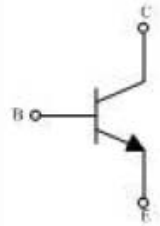
### Product Description

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

### Features

- Lead(Pb)-Free

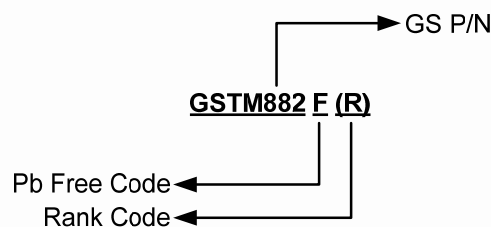
### Packages & Pin Assignments

SOT-89	
	
	
Pin	Description
1	Base
2	Collector
3	Emitter

### Marking Information

P/N	Package	Rank	Part Marking
GSTM882F	SOT-89	(R) / (O) / (Y) / (GR)	D882

### Ordering Information



Part Number	Package	Quantity
GSTM882F(R or O or Y or GR)	SOT-89	1000 PCS

## Absolute Maximum Ratings

$T_A=25^\circ\text{C}$

Symbol	Conditions	Typical	Unit
$V_{CEO}$	Collector-Emitter Voltage	30	V
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{EBO}$	Emitter-Base Voltage	6.0	V
$I_{C(DC)}$	Collector Current (DC)	3.0	A
$P_D$	Total Device Dissipation $T_A=25^\circ\text{C}$	0.5	W
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	250	$^\circ\text{C/W}$
$T_J$	Junction Temperature Range	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$

## Electrical Characteristics

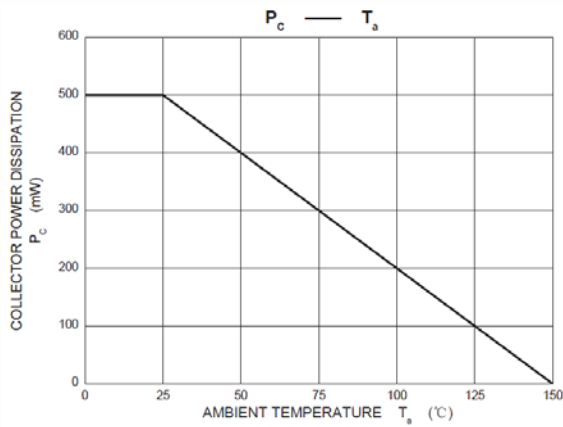
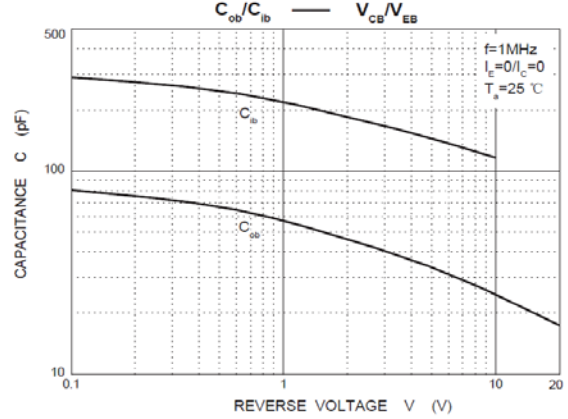
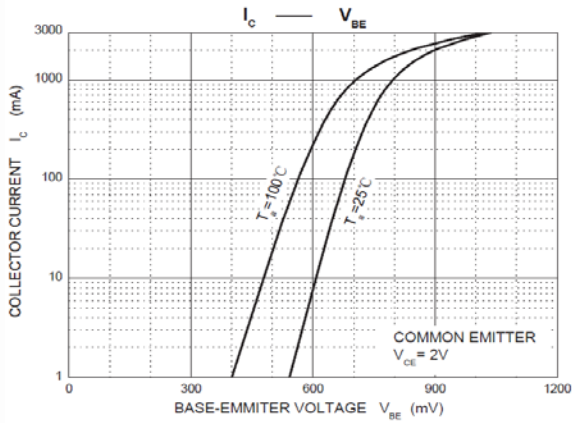
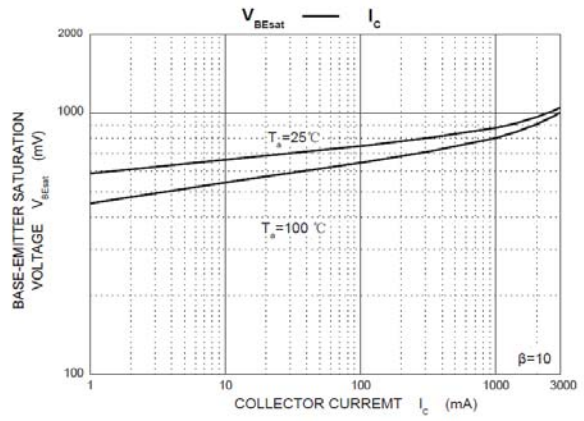
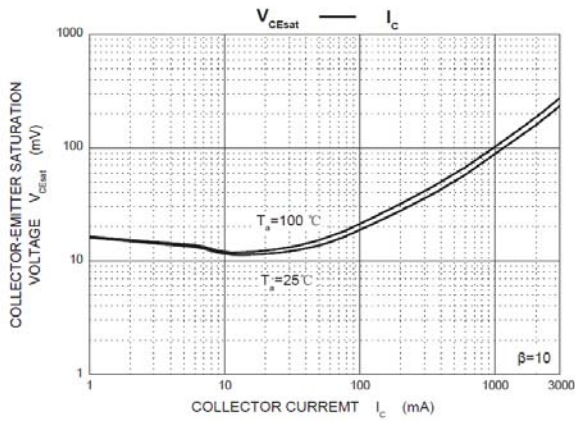
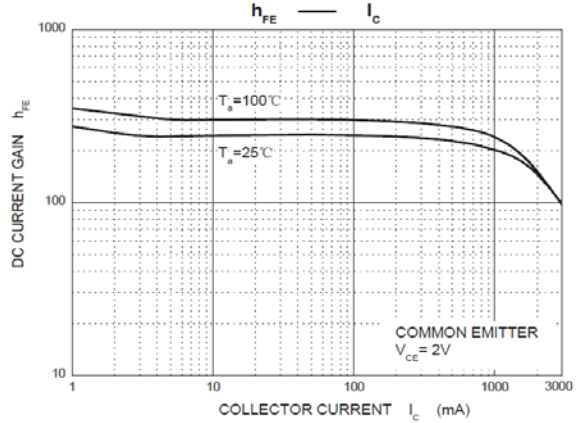
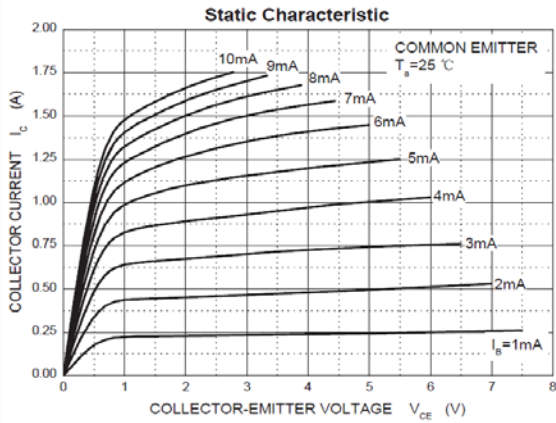
( $T_A=25^\circ\text{C}$  unless otherwise noted)

Symbol	Conditions	Min	TYP	Max	Unit
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=10\text{mA}$ , $I_B=0\text{mA}$ )	30	-	-	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 ( $I_E=100\mu\text{A}$ , $I_C=0\text{mA}$ )	6.0	-	-	V
$I_{CEO}$	Collector Cutoff Current ( $V_{CE}=30\text{V}$ , $I_B=0\text{mA}$ )	-	-	10	$\mu\text{A}$
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=40\text{V}$ , $I_E=0\text{mA}$ )	-	-	1.0	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=6.0\text{V}$ , $I_C=0\text{mA}$ )	-	-	1.0	$\mu\text{A}$
$h_{FE(1)}$	DC Current Gain ( $I_C=1.0\text{A}$ , $V_{CE}=2.0\text{V}$ )	60	-	400	-
$h_{FE(2)}$	DC Current Gain ( $I_C=100\text{mA}$ , $V_{CE}=2.0\text{V}$ )	32	-	-	-
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=2.0\text{A}$ , $I_B=0.2\text{A}$ )	-	-	0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=2.0\text{A}$ , $I_B=0.2\text{A}$ )	-	-	1.5	V
$f_T$	Current-Gain-Bandwidth Product ( $I_C=0.1\text{A}$ , $V_{CE}=5.0\text{V}$ , $f=10\text{MHz}$ )	-	50	-	MHz

## Classification of $h_{FE(1)}$

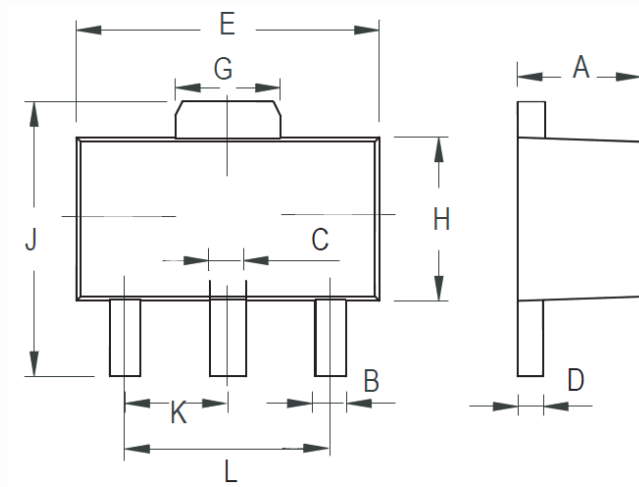
Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

# Typical Performance Characteristics



## Package Dimension

### SOT-89







### Dimensions

Symbol	Millimeters		Inches	
	Min	Max	Min	Max
<b>A</b>	1.400	1.600	0.0551	0.0629
<b>B</b>	0.320	0.520	0.0126	0.0204
<b>C</b>	0.360	0.560	0.0141	0.0220
<b>D</b>	0.350	0.440	0.0137	0.0173
<b>E</b>	4.400	4.600	0.1732	0.1811
<b>G</b>	1.400	1.800	0.0551	0.0708
<b>H</b>	2.300	2.600	0.0905	0.1023
<b>J</b>	3.940	4.250	0.1551	0.1673
<b>K</b>	1.500TYP		0.0590TYP	
<b>L</b>	2.900	3.100	0.1141	0.1220





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## CONTACT US

GS Headquarter	
	4F.,No.43-1,Lane11,Sec.6,Minquan E.Rd NeiHu District Taipei City 114, Taiwan (R.O.C)
	886-2-2657-9980
	886-2-2657-3630
	sales_twn@gs-power.com

Wu-Xi Branch	
	No.21 Changjiang Rd., WND, Wuxi, Jiangsu, China (INFO. & TECH. Science Park Building A 210 Room)
	86-510-85217051
	86-510-85211238
	sales_cn@gs-power.com

RD Division	
	824 Bolton Drive Milpitas. CA. 95035
	1-408-457-0587