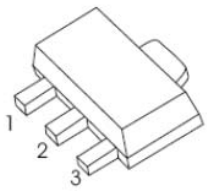
GOOD-ARK
SEMICONDUCTOR

GSBCX1440
PNP Transistor

Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- High collector current capability
- For low-frequency output amplification



1. Base
2. Emitter
3. Collector

SOT-89-3L

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

Parameter	Symbol	Max.	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-2	A
Collector Power Dissipation	P_C	500	mW
Operation Junction Temperature Range	T_J	-55 To +150	°C
Storage Temperature Range	T_{STG}	-55 To +150	°C

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)\ CBO}$	I_C=-10μA, I_E=0	-50	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)\ CEO}$	I_C=-1mA, I_B=0	-50	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)\ EBO}$	I_E=-10μA, I_C=0	-5	-	-	V
Collector Cut-Off Current	I_{CBO}	V_{CB}=-50V, I_E=0	-	-	-1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-1	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=-2V, I_C=-200mA	120	-	340	-
	$h_{FE(2)}$	V_{CE}=-2V, I_C=-1A	60	-	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-1A, I_B=-50mA	-	-	-0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=-1A, I_B=-50mA	-	-	-1.2	V
Transition Frequency	f_T	V_{CE}=-10V, I_C=50mA, f=200MHz	-	80	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	-	60	pF

Classification Of $h_{FE(1)}$

Rank	R	S
Range	120-240	170-340

Typical Characteristic Curves

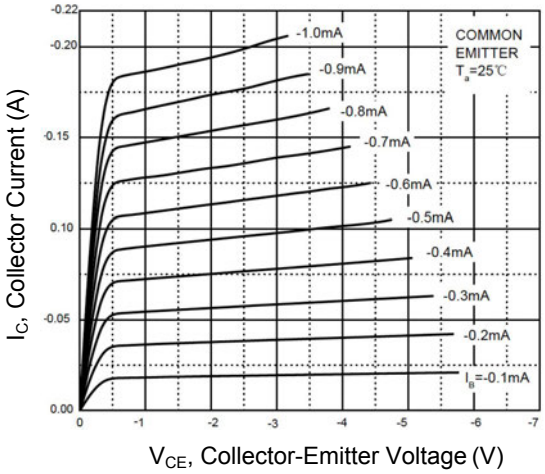


Figure 1. Static Characteristics

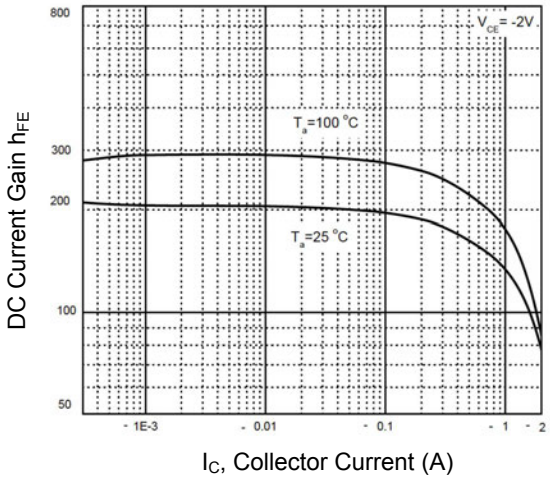


Figure 2. Current Gain vs. Collector Current

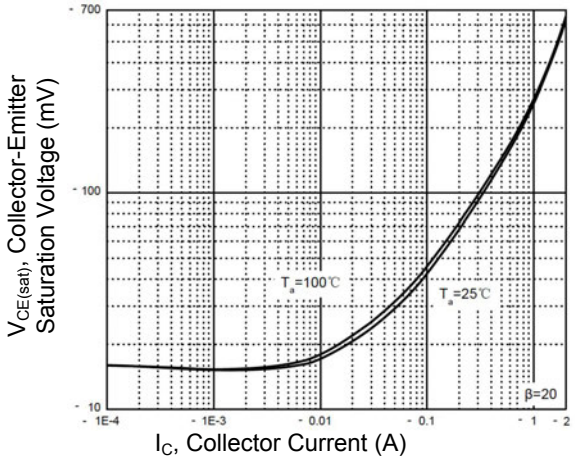


Figure 3. Collector - Emitter Saturation Voltage vs. Collector Current

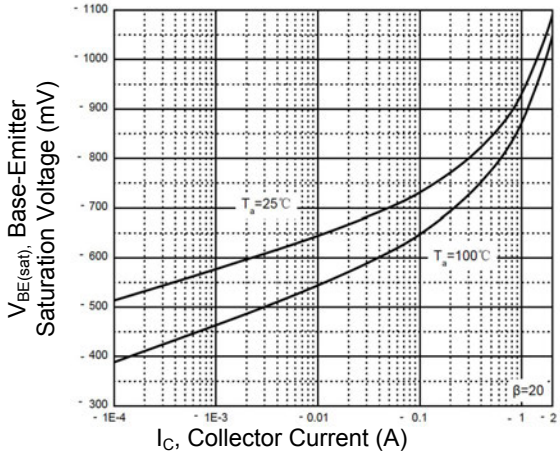


Figure 4. Base - Emitter Saturation Voltage vs. Collector Current

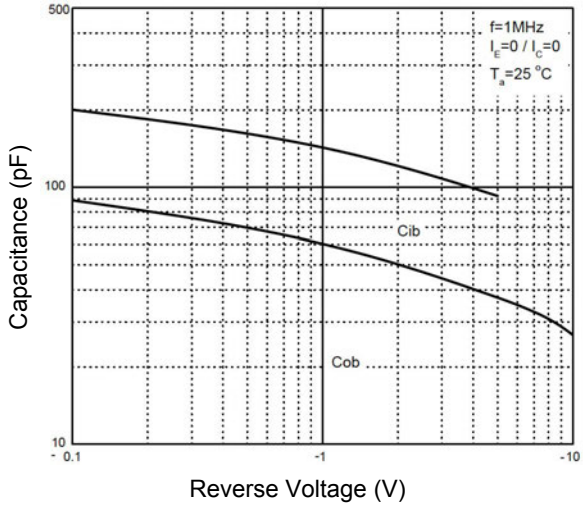


Figure 5. Capacitance Characteristics

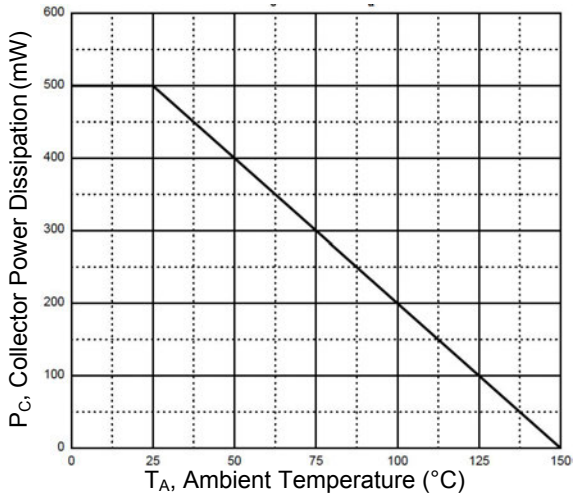
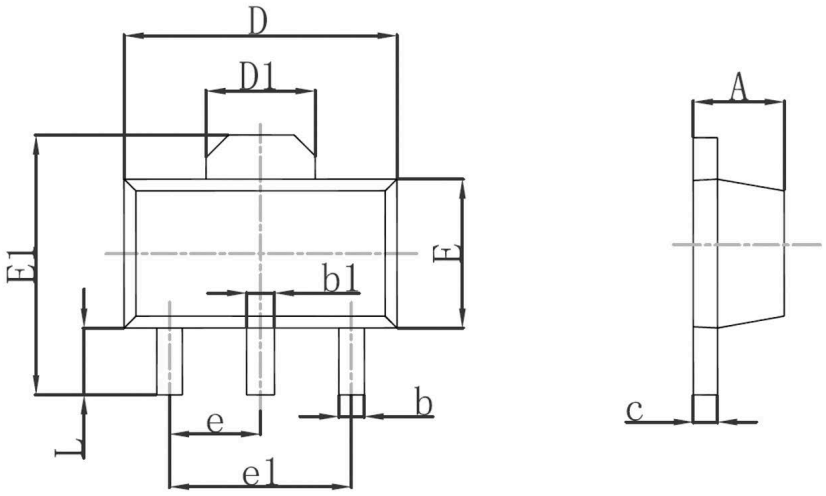


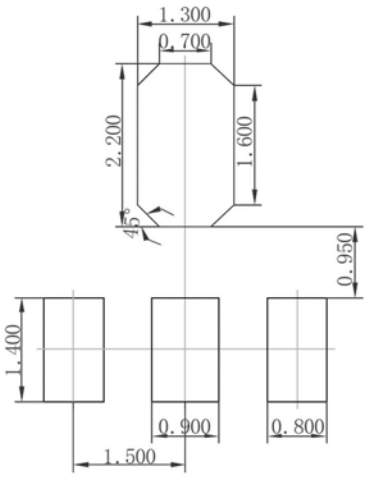
Figure 6. Power Dissipation vs Ambient Temperature

Package Outline Dimensions (SOT-89-3L)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

Recommended Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purposes only.