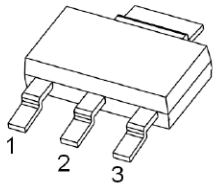
GOOD-ARK
SEMICONDUCTOR

GSBCP51-52-53
PNP Transistor

Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: GSBCP54/GSBCP55/GSBCP56 (NPN)



SOT-223

1. BASE
2. COLLECTOR
3. EMITTER

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

Parameter	Symbol	Rating			Unit
		GSBCP51	GSBCP52	GSBCP53	
Collector-Base Voltage	V_{CBO}	-45	-60	-100	V
Collector-Emitter Voltage	V_{CEO}	-45	-60	-80	V
Emitter-Base Voltage	V_{EBO}	-5			V
Collector Current -Continuous	I_C	-1			A
Collector Power Dissipation	P_C	1.5			W
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	94			°C/W
Storage Temperature Range	T_{STG}	-65 to +150			°C

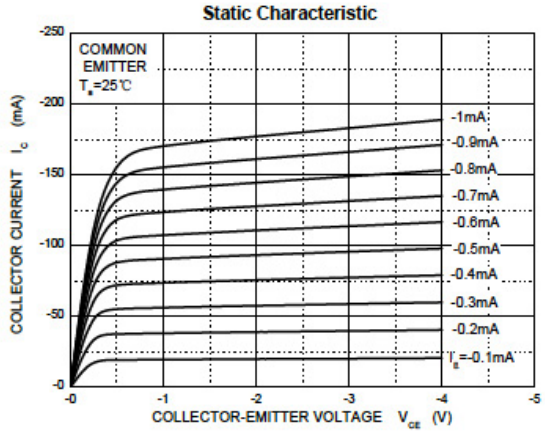
Electrical Characteristics (T_A=25°C unless otherwise noted)

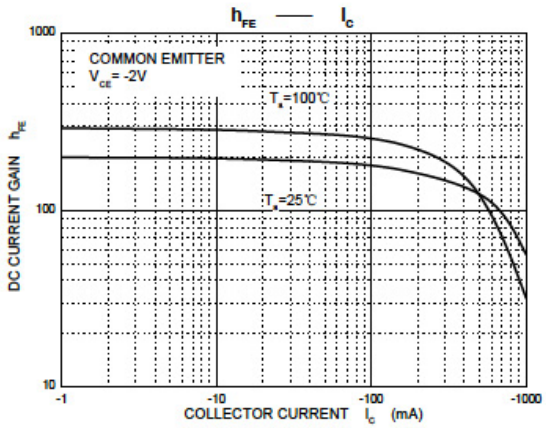
Parameter		Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	GSBCP51 GSBCP52 GSBCP53	$V_{(BR)CBO}$	I_C=- 0.1mA,I_E=0	-45 -60 -100	-	V
Collector-Emitter Breakdown Voltage	GSBCP51 GSBCP52 GSBCP53	$V_{(BR)CEO}$	I_C= -10mA,I_B=0	-45 -60 -80	-	V
Base-Emitter Breakdown Voltage		$V_{(BR)EBO}$	I_E= -10μA,I_C=0	-5	-	V
Collector Cut-Off Current		I_{CBO}	V_{CB}= -30 V, I_E=0	-	-100	nA
DC Current Gain		$h_{FE(1)}$	V_{CE}=-2V, I_C=-5mA	25	-	-
		$h_{FE(2)}$	V_{CE}= -2V, I_C=-150mA	63	250	-
		$h_{FE(3)}$	V_{CE}= -2V, I_C=-500mA	25	-	-
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-500mA,I_B=-50mA	-	-0.5	V
Base-Emitter Voltage		V_{BE}	V_{CE}=-2V, I_C=-500mA	-	-1	V
Transition Frequency		f_T	V_{CE}=-10V,I_C=-50mA, f=100MHz	100	-	MHz

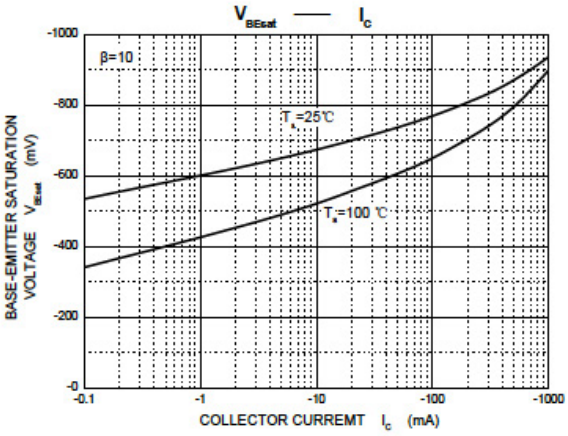
Classification of $h_{FE(2)}$

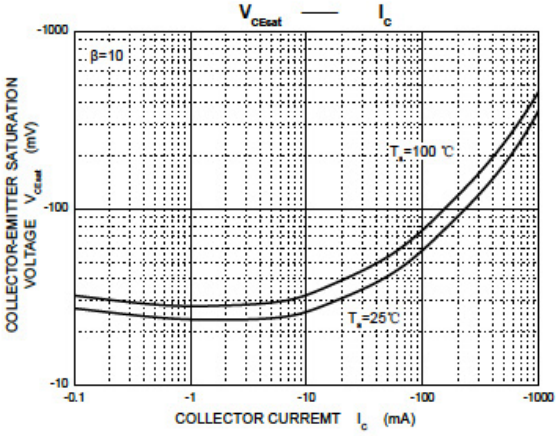
Rank	GSBCP51-10, GSBCP52-10, GSBCP53-10	GSBCP51-16, GSBCP52-16, GSBCP53-16
Range	63-160	100-250

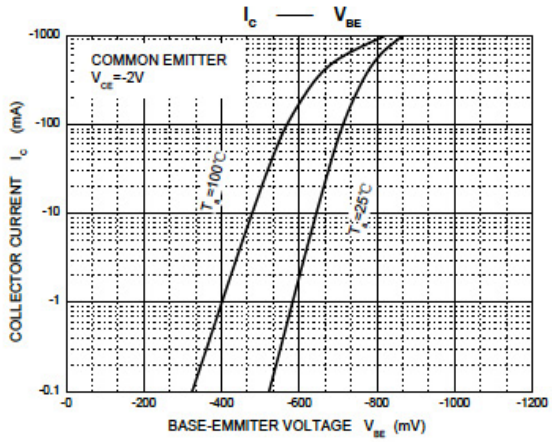
Typical Electrical Characteristic Curves

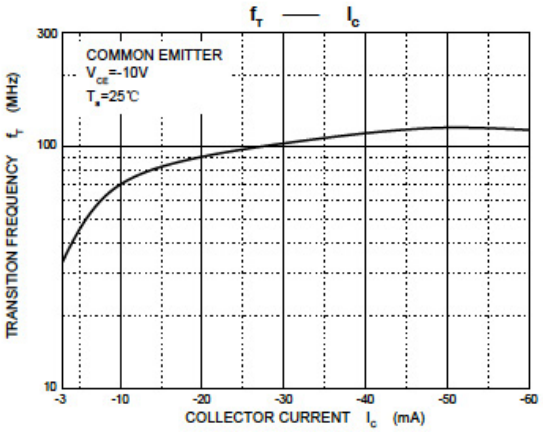




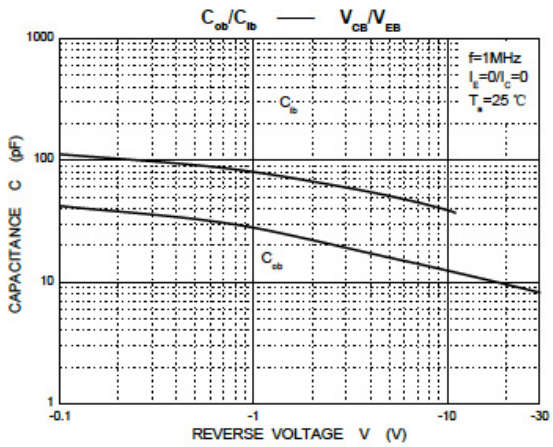


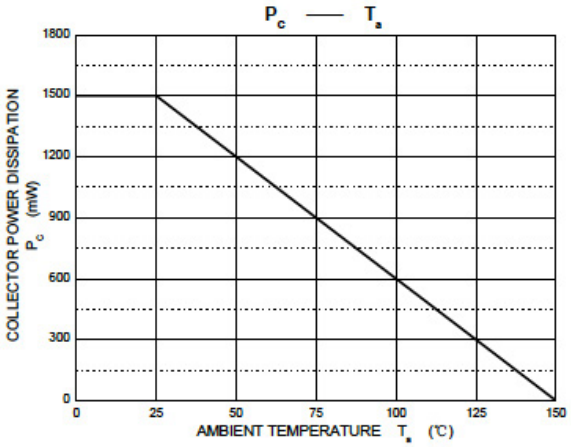






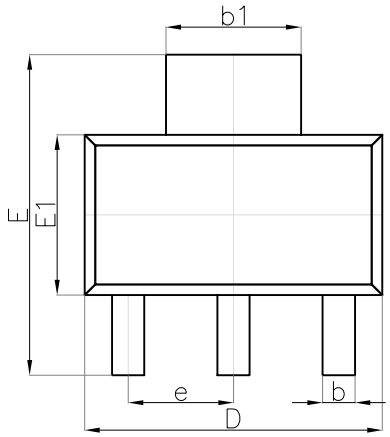
Typical Electrical Characteristic Curves

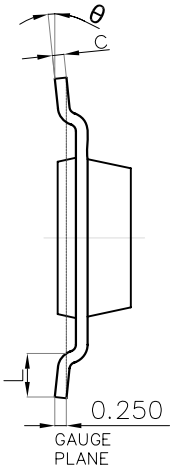


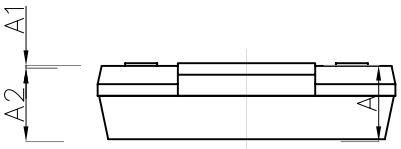


Package Outline Dimensions

SOT-223

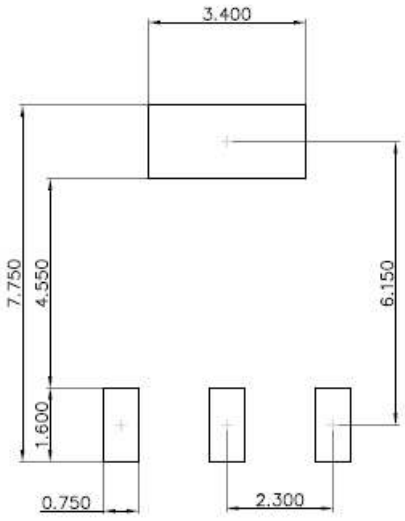






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	——	1.800	——	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	——	0.030	——
θ	0°	10°	0°	10°

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.050mm.
3.The pad layout is for reference purposes only.