

## PRELIMINARY

2SC5804

Notices: This is not a final specification.  
Some parametric limits are subject to change.

FOR LOW FREQUENCY AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE

## DESCRIPTION

2SC5804 is a super mini package resin sealed silicon NPN epitaxial transistor. It is designed for low frequency application. Since it is a super-thin flat lead type package, a high-density mounting are possible. Complementary with 2SC3052.

## FEATURE

Super-thin flat lead type package.  $t=0.45\text{mm}$   
Excellent linearity of DC forward current gain.  
Low collector to emitter saturation voltage  
 $V_{CE(sat)}=0.3\text{V max}$  ( $I_C=100\text{mA}/I_B=10\text{mA}$ )

## APPLICATION

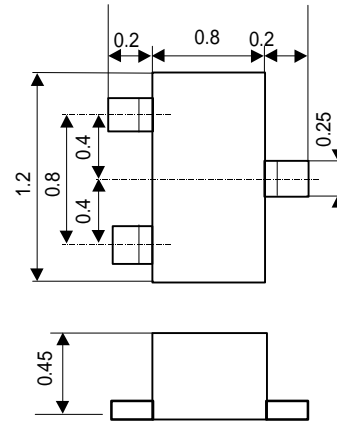
For hybrid IC, small type machine low frequency voltage amplify application.

MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

Symbol	Parameter	Ratings	Unit
$V_{CBO}$	Collector to Base voltage	50	V
$V_{CEO}$	Collector to Emitter voltage	6	V
$V_{EBO}$	Emitter to Base voltage	50	V
$I_O$	Collector current	200	mA
$P_c$	Collector dissipation	100	mW
$T_j$	Junction temperature	+ 125	
$T_{stg}$	Storage temperature	-55 ~ + 125	

## OUTLINE DRAWING

Unit: mm



JEITA:

TERMINAL CONNECTER

: BASE

: EMITTER

: COLLECTOR

ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

			Limits			
			Min	Typ	Max	
Collector to Emitter Breakdown voltage	$V(BR)_{CEO}$	$I_C=100\mu\text{A}, R_{BE}=\text{---}$	50			V
Collector cut off current	$I_{CBO}$	$V_{CB}=50\text{V}, I_E=0\text{mA}$	-	-	0.1	$\mu\text{A}$
Emitter cut off current	$I_{EBO}$	$V_{EB}=6\text{V}, I_C=0\text{mA}$	-	-	0.1	$\mu\text{A}$
DC forward current gain	hFE	$V_{CE}=6\text{V}, I_C=1\text{mA}$	150		800	-
DC forward current gain	hFE	$V_{CE}=6\text{V}, I_C=0.1\text{mA}$	90	-	-	-
C to E saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$	-	-	0.3	v
Gain bandwidth product	fT	$V_{CE}=6\text{V}, I_E=-10\text{mA}$	-	200	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=6\text{V}, I_E=0\text{mA}, f=1\text{MHz}$	-	2.5	-	pF
Noise figure	NF	$V_{CE}=6\text{V}, I_E=-0.1\text{mA}, f=1\text{kHz}, R_G=2\text{k}$	-	-	15	dB

It shows hFE classification in below table.

Item	E	F	G
hFE	150 ~ 300	250 ~ 500	400 ~ 800
Abbreviation	LE	LF	LG