

# 2SC5814

FOR LOW FREQUENCY AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE

## DESCRIPTION

2SC5814 is a super mini package silicon NPN epitaxial type transistor.

It is designed for low frequency voltage application.

## FEATURE

- Low collector to emitter saturation voltage.  
VCE(sat)=0.3V max(@I<sub>C</sub>=30mA, I<sub>B</sub>=1.5mA)
- Facilitates miniaturization and high-density mouting.
- Excellent linearity of DC forward current gain.

## APPLICATION

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

## MAXIMUM RATINGS (T<sub>a</sub>=25°C)

Symbol	Parameter	Ratings	Unit
V <sub>CB0</sub>	Collector to Base voltage	60	V
V <sub>EB0</sub>	Emitter to Base voltage	6	V
V <sub>CE0</sub>	Collector to Emitter voltage	60	V
I <sub>O</sub>	Collector current	125	mA
P <sub>c</sub>	Collector dissipation	150	mW
T <sub>j</sub>	Junction temperature	+125	°C
T <sub>stg</sub>	Storage temperature	-55~+125	°C

## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

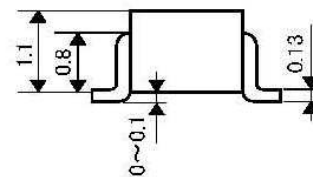
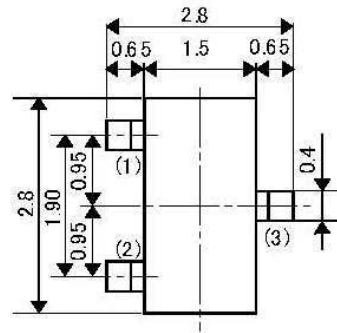
Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
C to E break down voltage	V(BR) <sub>CEO</sub>	I <sub>C</sub> =1uA, R <sub>BE</sub> =∞	60	-	-	V
Collector cut off current	ICBO	V <sub>CB</sub> =60V, I <sub>E</sub> =0mA	-	-	0.5	μA
Emitter cut off current	IEBO	V <sub>EB</sub> =4V, I <sub>C</sub> =0mA	-	-	0.5	μA
DC forward current gain	hFE	V <sub>CE</sub> =6V, I <sub>C</sub> =1mA	120	-	560	-
DC forward current gain	hFE	V <sub>CE</sub> =6V, I <sub>C</sub> =0.1mA	70	-	-	-
C to E Saturation Vlotage	VCE(sat)	I <sub>C</sub> =30mA, I <sub>B</sub> =1.5mA	-	-	0.3	V
Gain bandwidth product	fT	V <sub>CE</sub> =6V, I <sub>E</sub> =-10mA	-	200	-	MHz
Collector output capacitance	Cob	V <sub>CB</sub> =6V, I <sub>E</sub> =0mA, f=1MHz	-	1.5	-	pF

※ It shows h<sub>FE</sub> classification in below table.

Item	Q	R	S
h <sub>FE</sub>	120~270	180~390	180~390
Marking	EQ	ER	ES

## OUTLINE DRAWING

Unit: mm



JEITA: SC-59

JEDEC: similar to TO-236

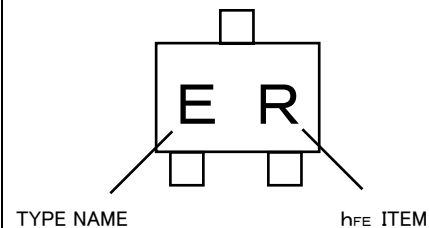
TERMINAL CONNECTER

①: BASE

②: EMITTER

③: COLLECTOR

## MARKING





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