〈Transistor〉

DEVELOPING

2SC5807

For Low Frequency Amplify Application
Silicon NPN Epitaxial Type

DESCRIPTION

2SC5807 is a silicon NPN epitaxial Transistor.
It designed with high collector current and high collector dissipation.

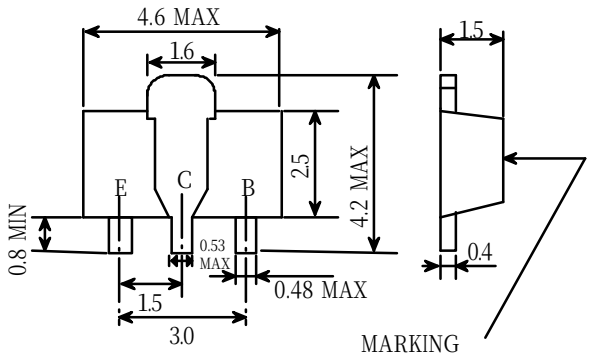
FEATURE

- ●High collector current I_C=5A
- ●Small collector to Emitter saturation voltage
  $V_{CE(sat)}$=0.25V TYP. (@I_C=4A,I_B=100mA)
- ●High collector dissipation P_C=500mW

APPLICATION

For storobe ,DC/DC convertor,power amplify apprication

OUTLINE DRAWING Unit: mm



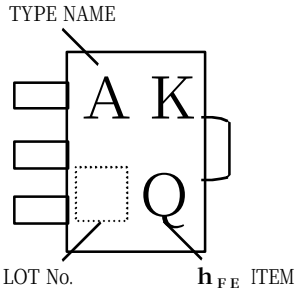
TERMINAL CONNECTER

E EMITTER
C: COLLECTOR
B: BASE

EIAJ : SC-62
JEDEC : —

Note)
The dimension without tolerance represent central value.

MARKING



MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	RATINGS	UNIT
V_{CBO}	Collector to Base voltage	50	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	20	V
I_C	Collector current	5	A
I_{CM}	Peak Collecter current *1	10	
P_C	Collector dissipation (Total, Ta=25°C)	0.5	W
	Collector dissipation (Total, Ta=25°C) *2	2	
T_j	Junction temperature	+150	°C
T_{stg}	Storage temperature	-55～+150	°C

*1 Single Pulse Pw=10msec

*2 Pakkage mounted on 35mm×50mm×0.8mm ceramic board.

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ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TESTCONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B break down voltage	I_C=50μA, I_E=0mA	50			V
$V_{(BR)EBO}$	E to B break down voltage	I_E=50μA, I_C=0mA	6			V
$V_{(BR)CEO}$	C to E break down voltage	I_C=1mA, R_{BE}=∞	20			V
I_{CBO}	Collector cut off current	V_{CB}=40V, I_E=0mA			0.5	μA
I_{EBO}	Emitter cut off current	V_{EB}=5V, I_C=0mA			0.5	μA
h_{FE}	DC forward current gain	V_{CE}=2V, I_C=0.5A	120		390	-
$V_{CE(sat)}$	C to E saturation voltage	I_C=4A, I_B=100mA		0.25	1.0	V
f_T	Gain band width product	V_{CE}=6V, I_E=-50mA		150		MHz
Cob	Collector output capacitance	V_{CB}=20V, I_E=0mA, f=1MHz		30		pF

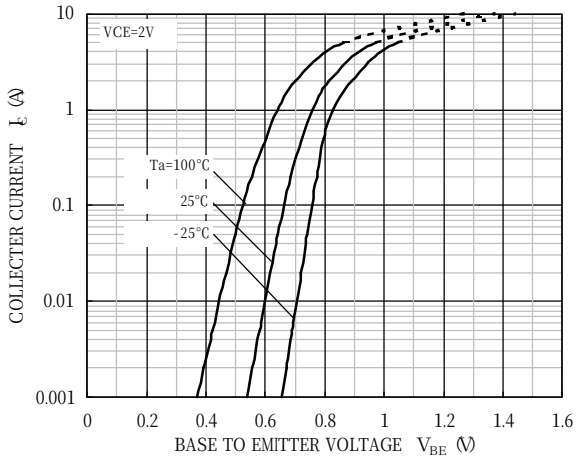
* Measured using pulse current.

* It shows h_{FE} classification in right table.

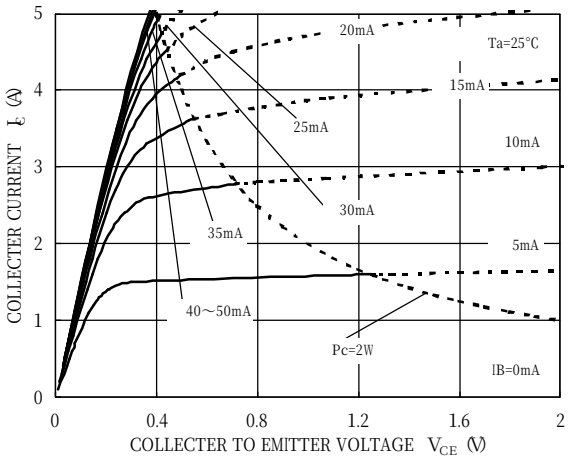
Marking	Q	R
h_{FE}	120 to 270	180 to 390

TYPICAL CHARACTERISTICS

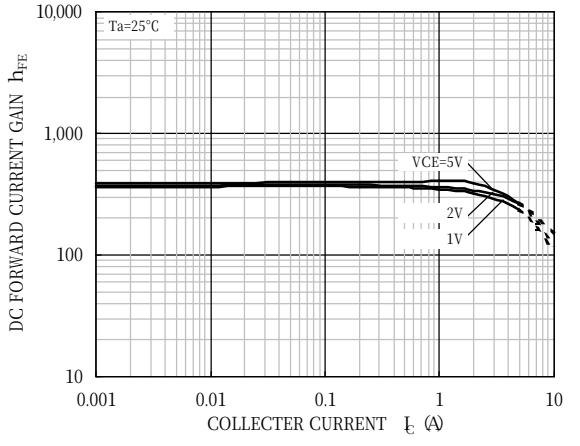
COMMON EMITTER TRANSFER



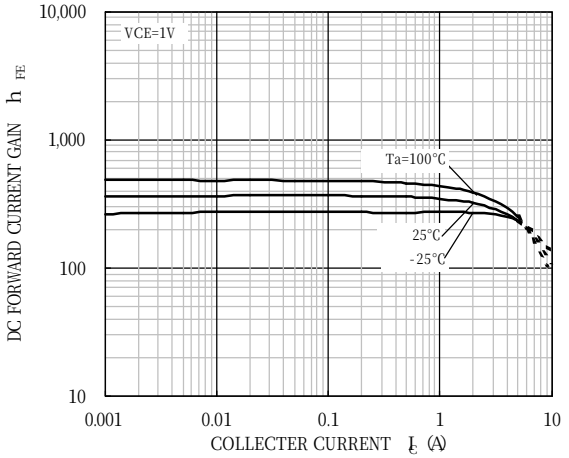
COMMON EMITTER OUTPUT



DC FORWARD CURRENT GAIN
VS. COLLECTER CURRENT(I)



DC FORWARD CURRENT GAIN
VS. COLLECTER CURRENT(II)



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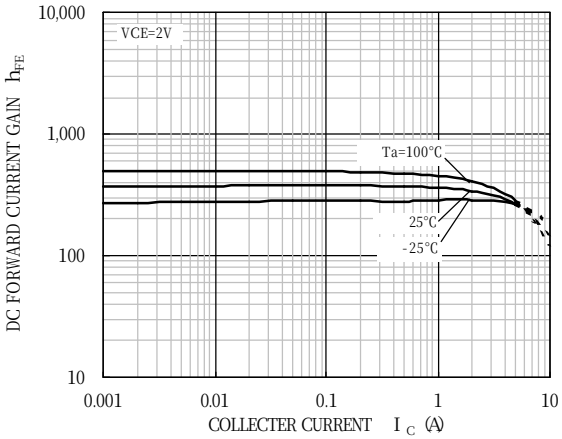
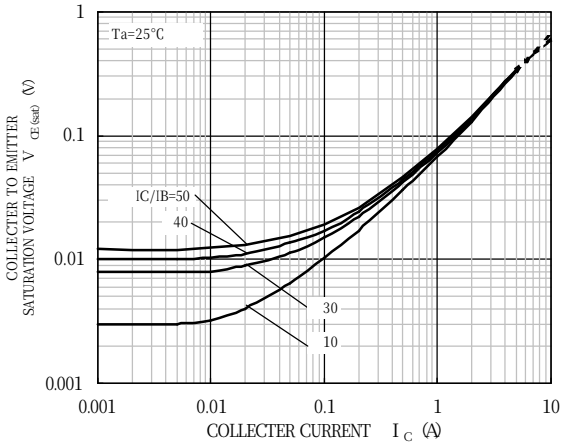
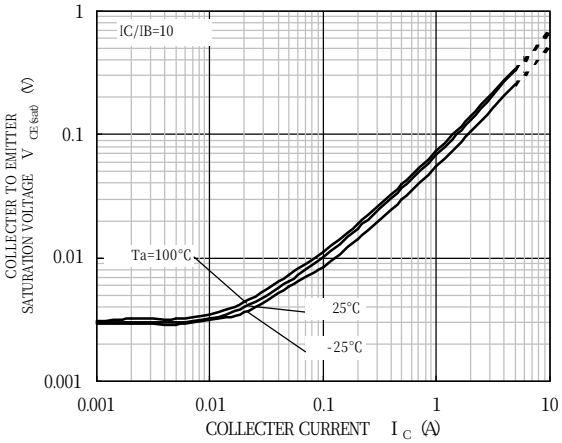
DC FORWARD CURRENT GAIN
VS. COLLECTER CURRENT(III)



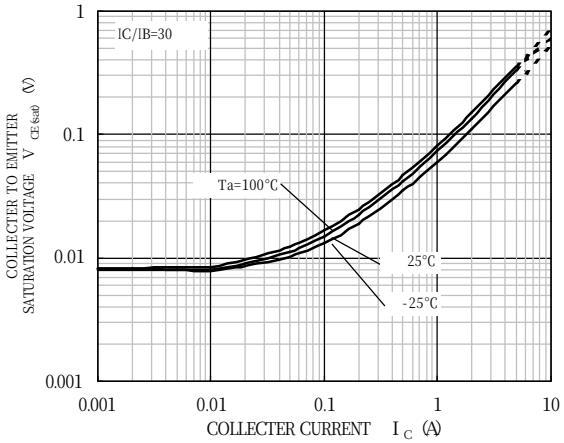
COLLECTER TO EMITTER SATURATION
VOLTAGE VS. COLLECTER CURRENT(I)



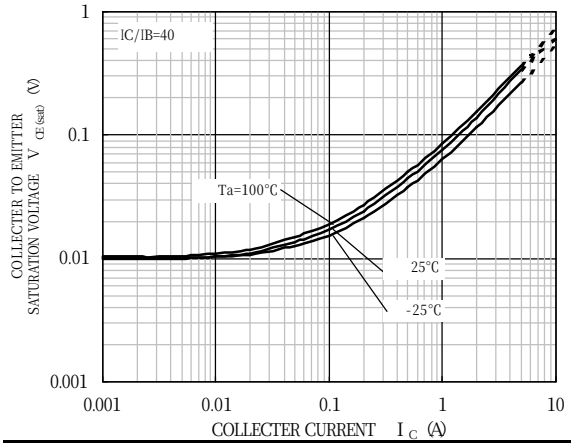
COLLECTER TO EMITTER SATURATION
VOLTAGE VS. COLLECTER CURRENT(II)



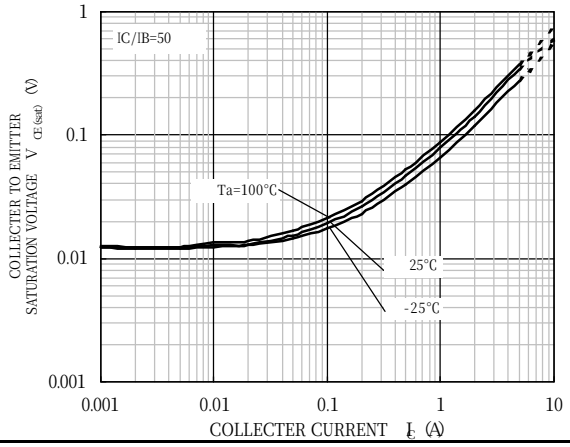
COLLECTER TO EMITTER SATURATION
VOLTAGE VS. COLLECTER CURRENT(III)



COLLECTER TO EMITTER SATURATION
VOLTAGE VS. COLLECTER CURRENT(IV)



COLLECTER TO EMITTER SATURATION
VOLTAGE VS. COLLECTER CURRENT(V)



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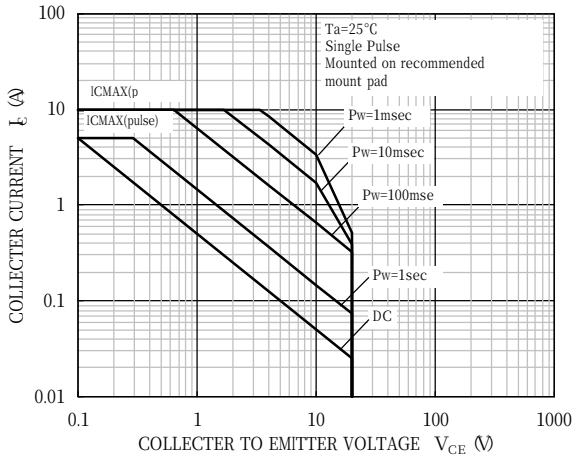
AREA OF SAFETY OPERATION



ISAHAYA ELECTRONICS CORPORATION

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