

## DESCRIPTION

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

## FEATURE

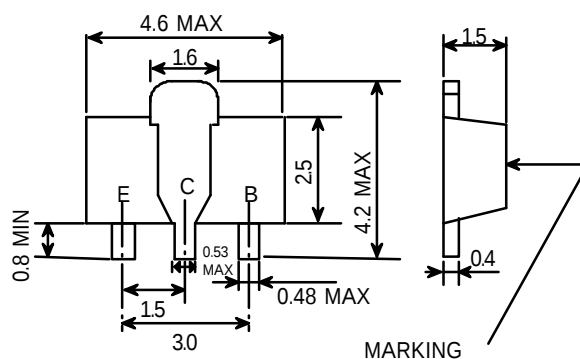
- High collector current  $I_C=5A$
- Small collector to Emitter saturation voltage  
 $V_{CE(sat)}=0.25V$  TYP. (@ $I_C=4A, I_B=100mA$ )
- High collector dissipation  $P_C=500mW$

## APPLICATION

For storobe ,DC/DC convertor,power amplify apprication

## OUTLINE DRAWING

Unit: mm



## TERMINAL CONNECTER

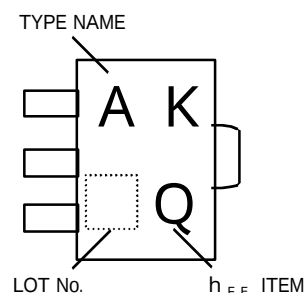
E: EMITTER  
 C: COLLECTOR  
 B: BASE

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 Collector 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       |      |
| $T_{stg}$ | Storage temperature                       | -55 ~ + 150 |      |

\*1 Single Pulse  $P_w=10msec$

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

ELECTRICAL CHARACTERISTICS (Ta=25 °C)

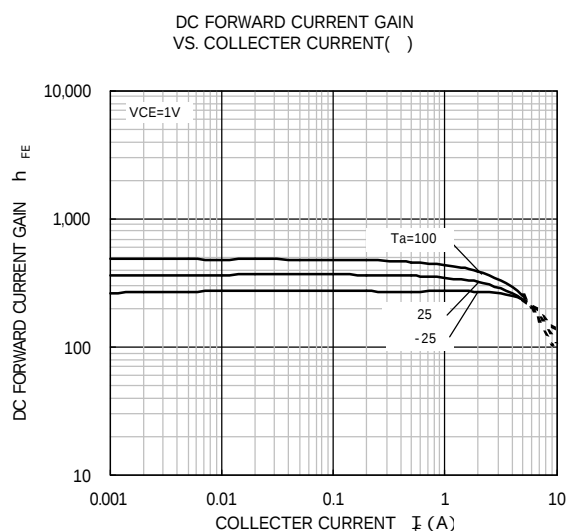
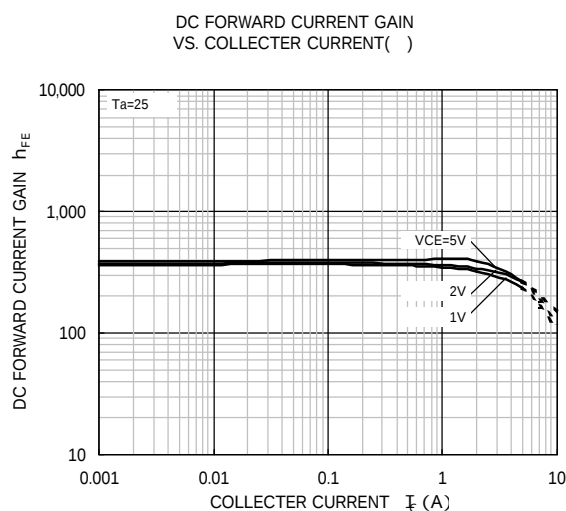
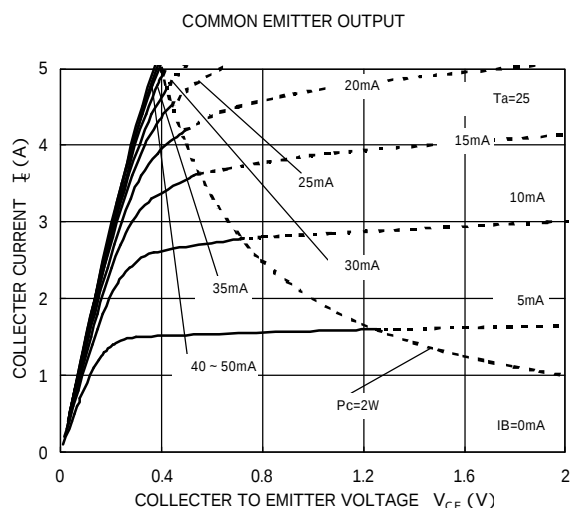
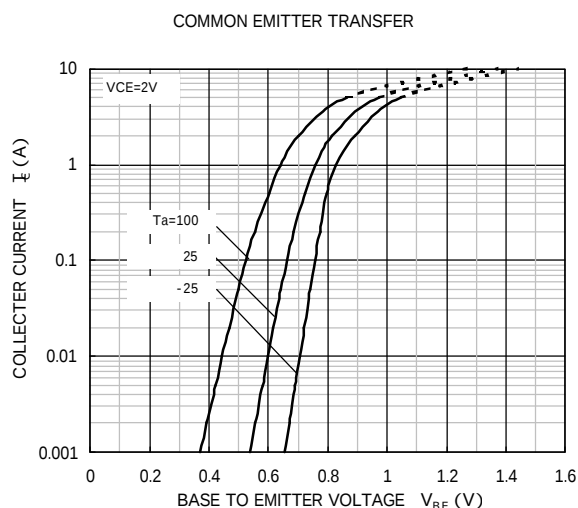
| SYMBOL        | PARAMETER                    | TEST CONDITIONS               | LIMITS |      |     | UNIT    |
|---------------|------------------------------|-------------------------------|--------|------|-----|---------|
|               |                              |                               | MIN    | TYP  | MAX |         |
| $V_{(BR)CBO}$ | C to B break down voltage    | $I_C=50\mu A, I_E=0mA$        | 50     |      |     | V       |
| $V_{(BR)EBO}$ | E to B break down voltage    | $I_E=50\mu A, I_C=0mA$        | 6      |      |     | V       |
| $V_{(BR)CEO}$ | C to E break down voltage    | $I_C=1mA, R_{BE}=\infty$      | 20     |      |     | V       |
| $I_{CBO}$     | Collector cut off current    | $V_{CB}=40V, I_E=0mA$         |        |      | 0.5 | $\mu A$ |
| $I_{EBO}$     | Emitter cut off current      | $V_{EB}=5V, I_C=0mA$          |        |      | 0.5 | $\mu A$ |
| $h_{FE}$      | 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     |
| $C_{ob}$      | Collector output capacitance | $V_{CB}=20V, I_E=0mA, f=1MHz$ |        | 30   |     | pF      |

\* Measured using pulse current.

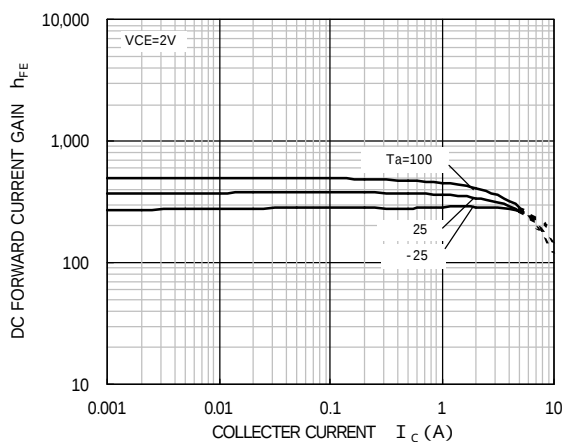
\* It shows  $h_{FE}$  classification in right table.

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

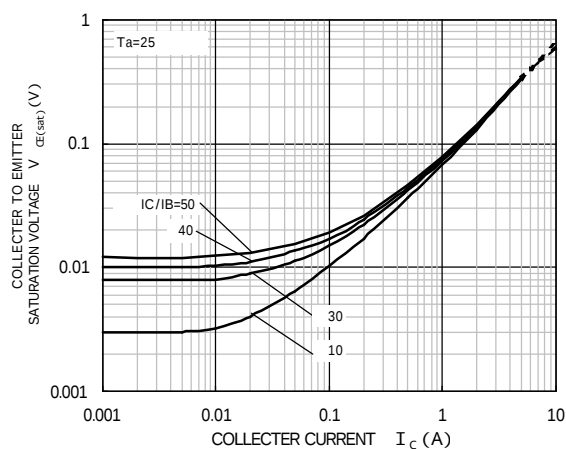
TYPICAL CHARACTERISTICS



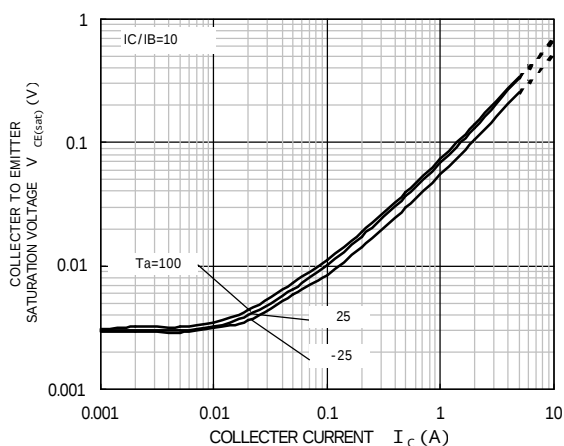
DC FORWARD CURRENT GAIN  
VS. COLLECTOR CURRENT( )



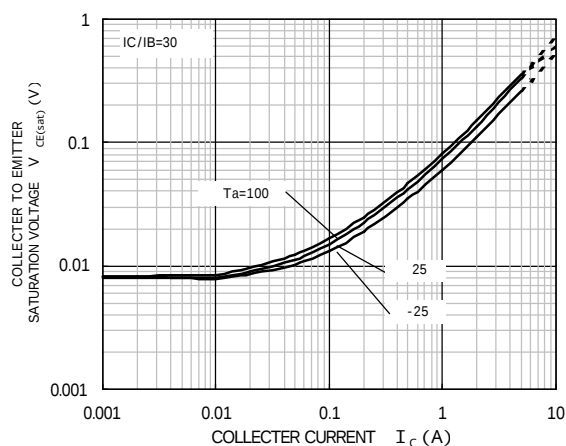
COLLECTOR TO EMITTER SATURATION  
VOLTAGE VS. COLLECTOR CURRENT( )



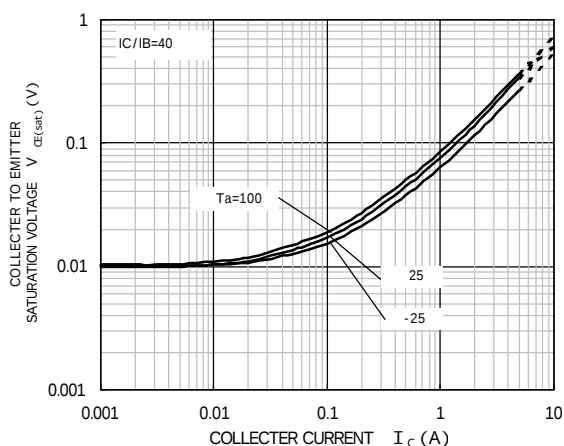
COLLECTOR TO EMITTER SATURATION  
VOLTAGE VS. COLLECTOR CURRENT( )



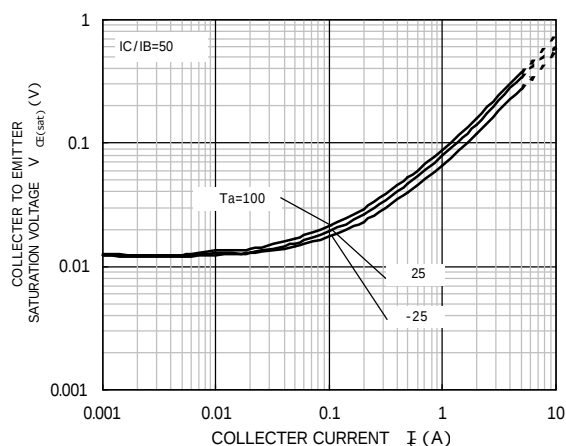
COLLECTOR TO EMITTER SATURATION  
VOLTAGE VS. COLLECTOR CURRENT( )

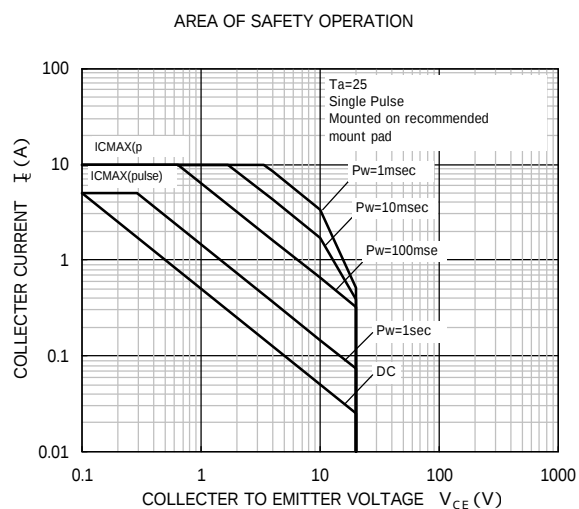


COLLECTOR TO EMITTER SATURATION  
VOLTAGE VS. COLLECTOR CURRENT( )



COLLECTOR TO EMITTER SATURATION  
VOLTAGE VS. COLLECTOR CURRENT( )







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