

# INC6005AP1

FOR LOW FREQUENCY AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE

## DESCRIPTION

INC6005AP1 is a silicon NPN transistor.

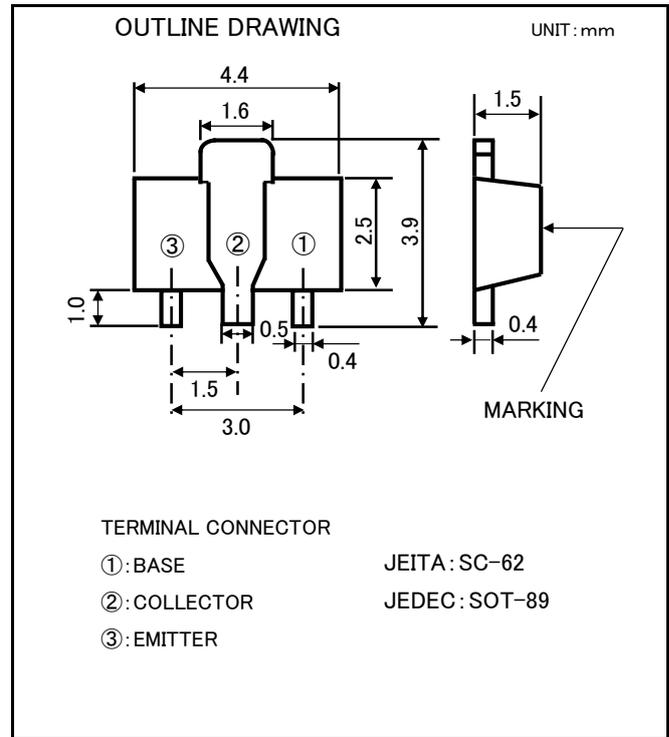
It is designed with high voltage.

## FEATURE

- Small package for easy mounting.
- High voltage  $V_{CEO} = 400V$

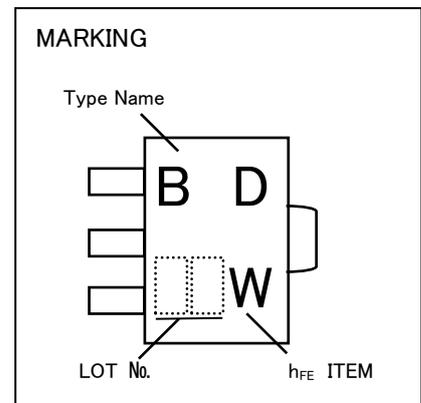
## APPLICATION

DC-DC converter, High voltage switching.



## MAXIMUM RATING ( $T_a=25^\circ C$ )

| SYMBOL    | PARAMETER                                  | RATING     | UNIT       |
|-----------|--|------------|------------|
| $V_{CBO}$ | Collector to Base voltage                  | 400        | V          |
| $V_{EBO}$ | Emitter to Base voltage                    | 7          | V          |
| $V_{CEO}$ | Collector to Emitter voltage               | 400        | V          |
| $I_C$     | Collector current                          | 100        | mA         |
| $P_C$     | Collector dissipation ( $T_a=25^\circ C$ ) | 500        | mW         |
| $T_j$     | Junction temperature                       | +150       | $^\circ C$ |
| $T_{stg}$ | Storage temperature                        | -55 ~ +150 | $^\circ C$ |



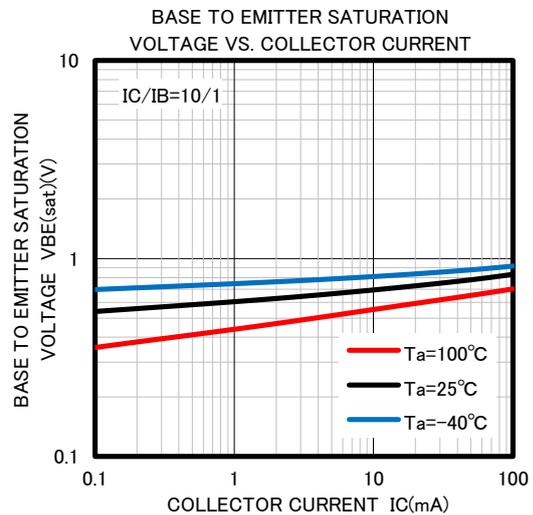
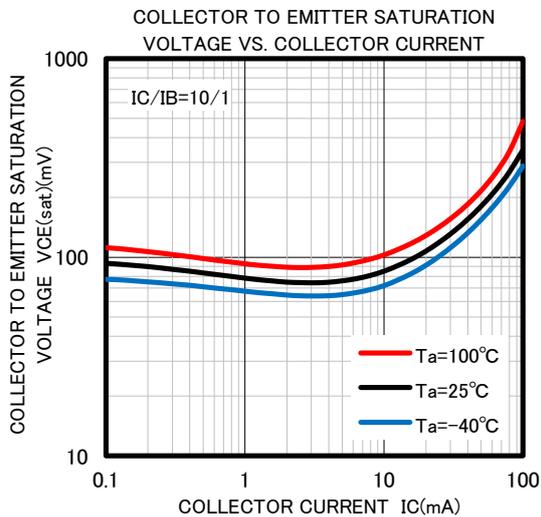
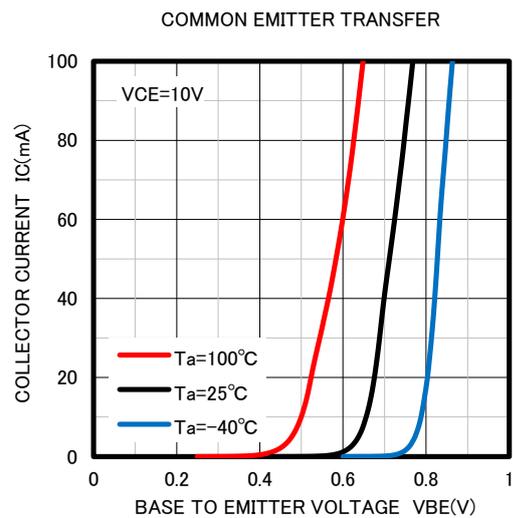
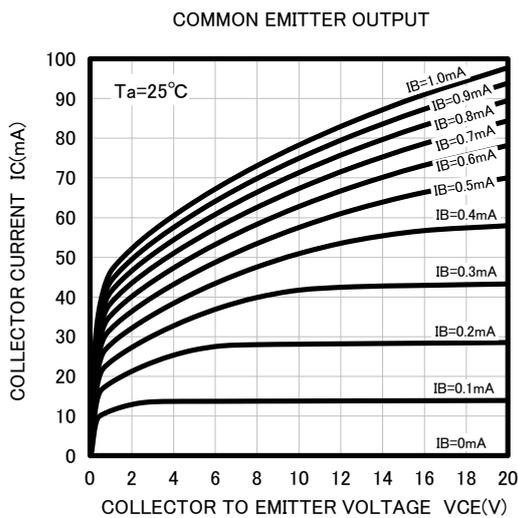
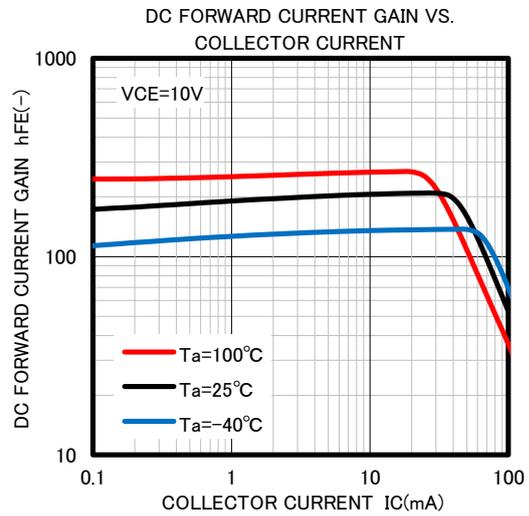
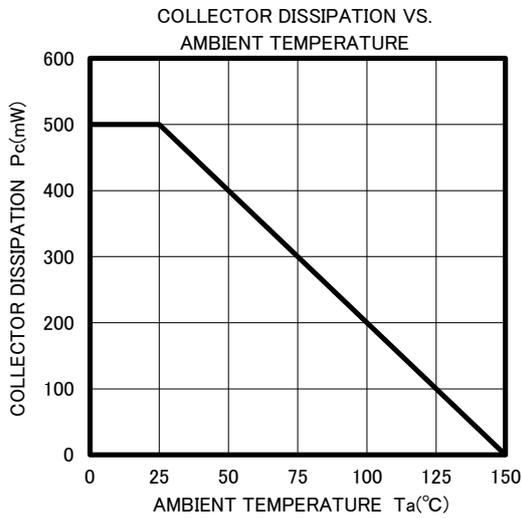
## ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

| SYMBOL        | PARAMETER                    | TEST CONDITIONS               | LIMITS |     |     | UNIT    |
|---------------|------------------------------|-------------------------------|--------|-----|-----|---------|
|               |                              |                               | MIN    | TYP | MAX |         |
| $V_{(BR)CBO}$ | C to B breakdown voltage     | $I_C=50 \mu A, I_E=0mA$       | 400    | -   | -   | V       |
| $V_{(BR)EBO}$ | E to B breakdown voltage     | $I_E=50 \mu A, I_C=0mA$       | 7      | -   | -   | V       |
| $V_{(BR)CEO}$ | C to E breakdown voltage     | $I_C=1mA, R_{BE}=\infty$      | 400    | -   | -   | V       |
| $I_{CBO}$     | Collector cut off current    | $V_{CB}=400V, I_E=0mA$        | -      | -   | 1   | $\mu A$ |
| $I_{EBO}$     | Emitter cut off current      | $V_{EB}=6V, I_C=0mA$          | -      | -   | 1   | $\mu A$ |
| $h_{FE}$      | DC forward current gain      | $V_{CE}=10V, I_C=10mA$        | 82     | -   | 280 | -       |
| $V_{CE(sat)}$ | C to E saturation voltage    | $I_C=10mA, I_B=1mA$           | -      | -   | 0.5 | V       |
| fT            | Gain bandwidth product       | $V_{CE}=20V, I_E=-10mA$       | -      | 70  | -   | MHz     |
| Cob           | Collector output capacitance | $V_{CE}=10V, I_E=0mA, f=1MHz$ | -      | 3.3 | -   | pF      |

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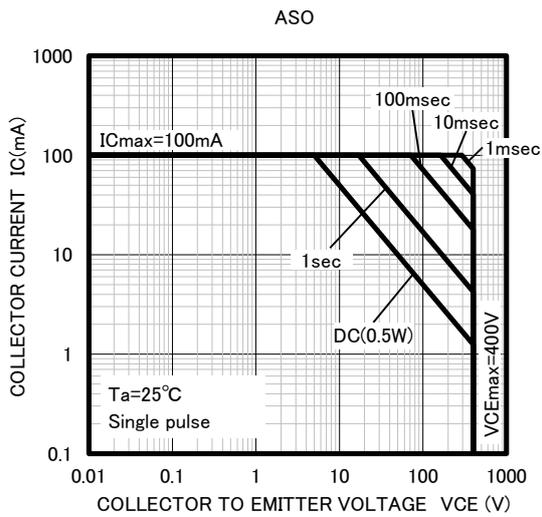
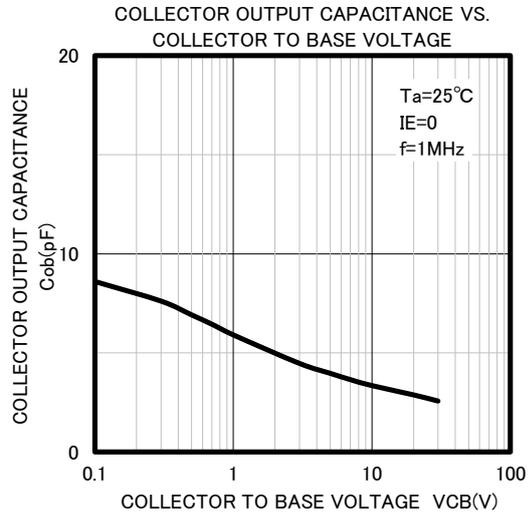
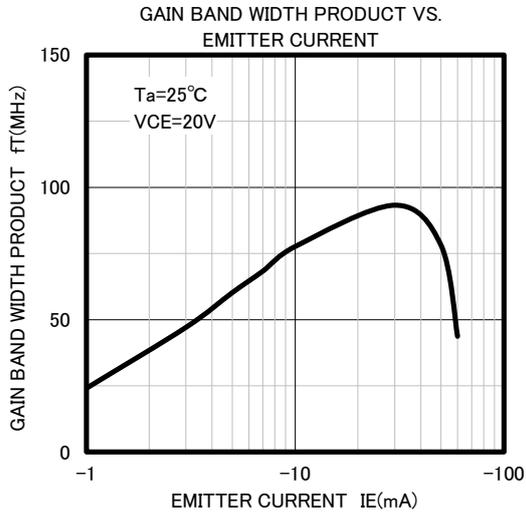
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## TYPICAL CHARACTERISTICS



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