

PRELIMINARY

<SMALL-SIGNAL TRANSISTOR>

**INC6002AC1**

FOR LOW FREQUENCY AMPLIFY APPLICATION  
SILICON NPN TRANSISTOR

Notice : This is not a final specification.  
Some parametric subject to change.

**DESCRIPTION**

INC6002AC1 is a silicon NPN transistor.  
It is designed with high voltage.

**FEATURE**

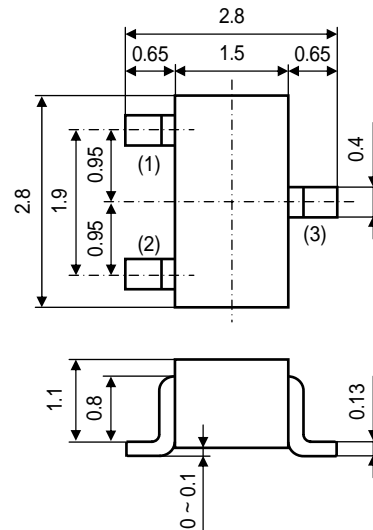
- Super mini package for easy mounting.
- High voltage  $V_{CEO}=300V$

**APPLICATION**

DC/DC convertor, High voltage switching

**OUTLINE DRAWING**

Unit : mm

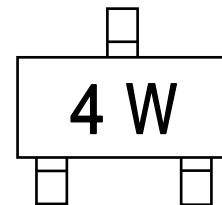


TERMINAL CONNECTOR JEITA : SC-59  
(1) BASE JEDEC : Similar to TO-236  
(2) EMITTER  
(3) COLLECTOR

**MAXIMUM RATINGS (Ta=25 °C)**

Symbol	Parameter	Ratings	Unit
V <sub>CB0</sub>	Collector-Base Voltage	300	V
V <sub>EB0</sub>	Emitter-Base Voltage	7	V
V <sub>CEO</sub>	Collector-Emitter Voltage	300	V
I <sub>c</sub>	Collector Current	50	mA
P <sub>c</sub>	Collector Dissipation	150	mW
T <sub>j</sub>	Junction Temperature	150	
T <sub>stg</sub>	Storage Temperature	-55 ~ +150	

**MARKING**



**ELECTRIC CHARACTERISTICS (Ta=25 °C)**

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>c</sub> =50μA, I <sub>E</sub> =0	300	-	-	V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> =50μA, I <sub>c</sub> =0	5	-	-	V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>c</sub> =1mA, R <sub>BE</sub> =	300	-	-	V
I <sub>CB0</sub>	Collector Cutoff Current	V <sub>CB</sub> =300V, I <sub>E</sub> =0	-	-	0.5	μA
I <sub>EB0</sub>	Emitter Cutoff Current	V <sub>EB</sub> =5V, I <sub>c</sub> =0	-	-	0.5	μA
h <sub>FE</sub>	DC Forward Current Gain	V <sub>CE</sub> =10V, I <sub>c</sub> =1mA	50	-	305	-
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>c</sub> =10mA, I <sub>B</sub> =1mA	-	-	1.0	V
f <sub>T</sub>	Gain Bandwidth Product	V <sub>CE</sub> =10V, I <sub>E</sub> =-10mA	-	50	-	MHz
C <sub>ob</sub>	Collector Output Capacitance	V <sub>CB</sub> =6V, I <sub>E</sub> =0, f=1MHz	-	1.9	-	pF

PRELIMINARY

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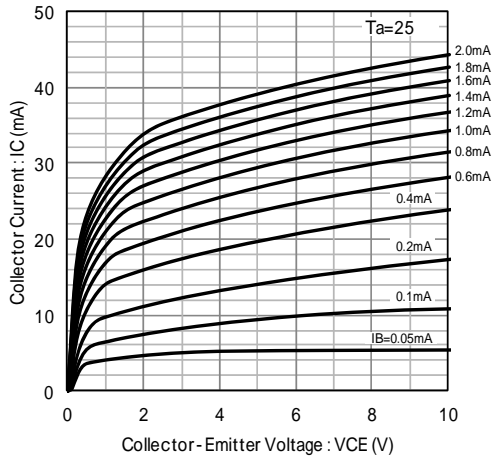
<SMALL-SIGNAL TRANSISTOR>

**INC6002AC1**

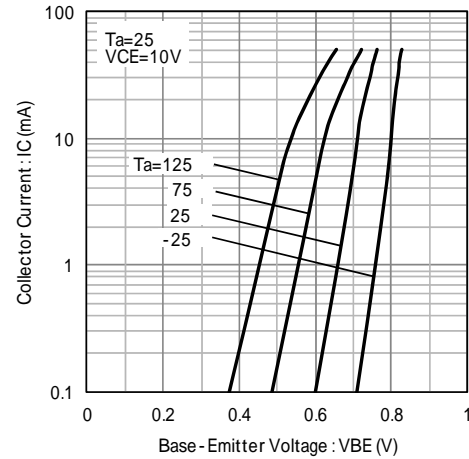
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### TYPICAL CHARACTERISTICS

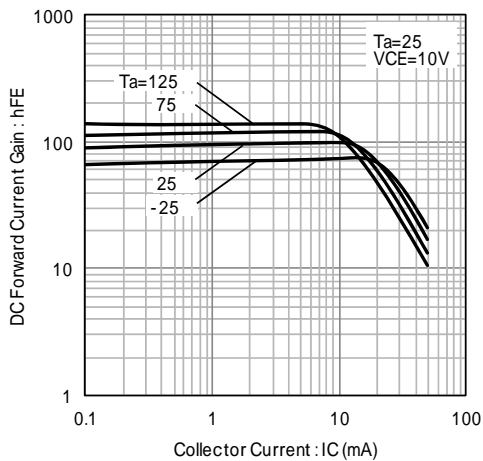
Common Emitter Output



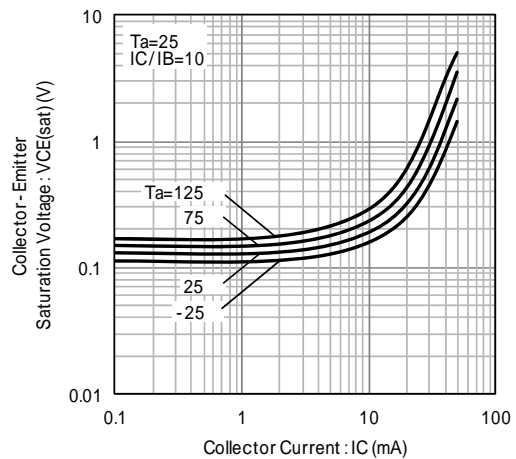
Common Emitter Transfer



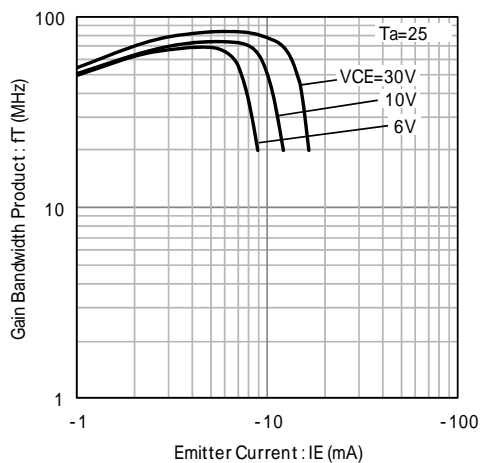
hFE-IC



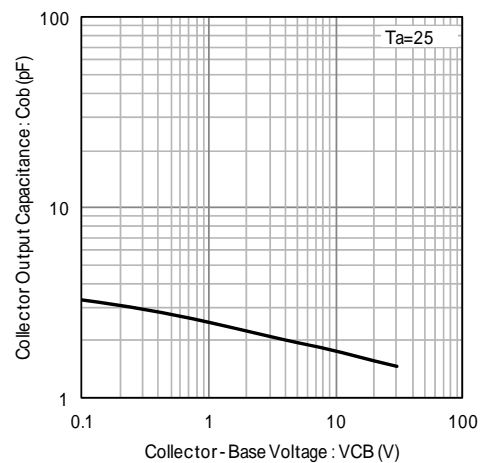
VCE(sat) - IC



fT - IE



Cob-VCB





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**Keep safety first in your circuit designs!**

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