〈SMALL-SIGNAL TRANSISTOR〉

INC6001AC1

FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

INC6001AC1 is a super mini package resin sealed silicon NPN epitaxial transistor,
It is designed for low frequency voltage application.

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FEATURE

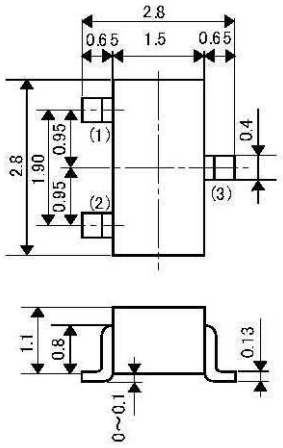
- ●Super mini package for easy mounting
- ●Low $V_{CE(sat)}$ $V_{CE(sat)}$=0.5V_{max} (@I_C=500mA/I_B=50mA)
- ●High collector current I_C=1A
- ●High voltage V_{CEO}=100V

APPLICATION

For DC/DC converter, power supply etc.

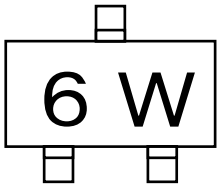
OUTLINE DRAWING

Unit:mm



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

MARKING



MAXIMUM RATINGS(Ta=25℃)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	120	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	100	V
I_C	Collector current	1	A
I_{CM}	Collector dissipation	200	mW
P_C	Junction temperature	＋150	℃
T_j	Storage temperature	−55～＋150	℃

ELECTRICAL CHARACTERISTICS(Ta=25℃)

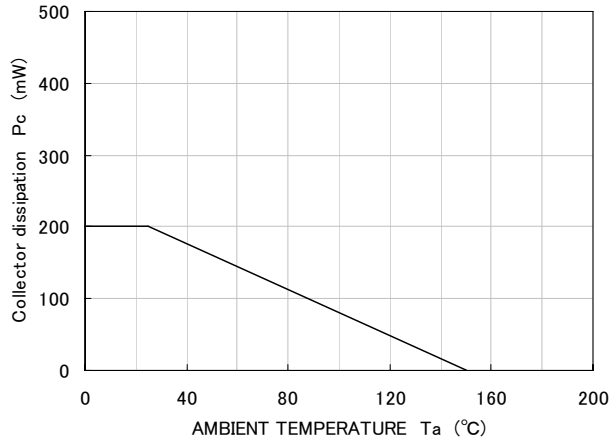
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	I_C=10μA, I_E=0	120	−	−	V
$V_{(BR)EBO}$	E to B break down voltage	I_E=10μA, I_C=0	6	−	−	V
$V_{(BR)CEO}$	C to E break down voltage	I_C=1mA, R_{BE}=∞	100	−	−	V
I_{CBO}	Collector cut off current	V_{CB}=120V, I_E=0mA	−	−	500	nA
I_{EBO}	Emitter cut off current	V_{EB}=6V, I_C=0mA	−	−	500	nA
h_{FE}	DC forward current gain	V_{CE}=2V, I_C=150mA	100	−	300	
$V_{CE(sat)}$	C to E Saturation Voltage	I_C=500mA, I_B=50mA	−	−	0.5	V
f_T	Gain bandwidth product	V_{CE}=10V, I_E=−50mA	−	270	−	MHz
C_{ob}	Collector output capacitance	V_{CB}=10V, I_E=0mA, f=1MHz	−	5	−	pF

INC6001AC1

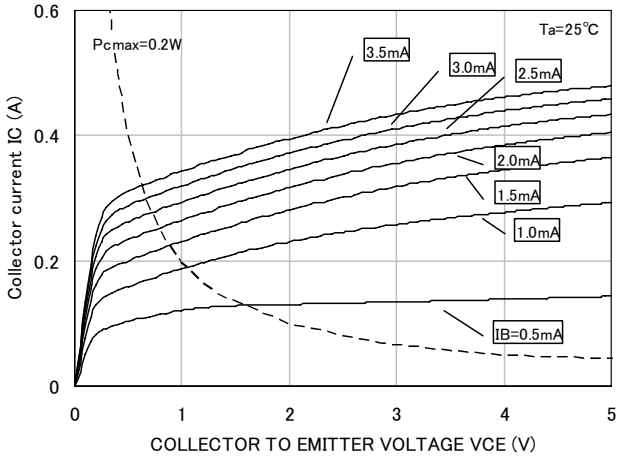
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TYPICAL CHARACTERISTICS

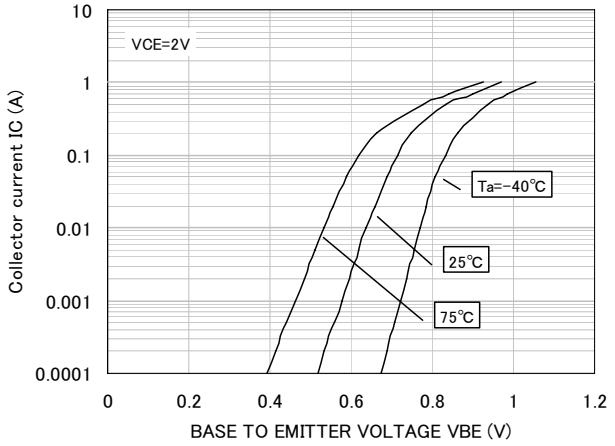
Collector dissipation-AMBIENT TEMPERATURE



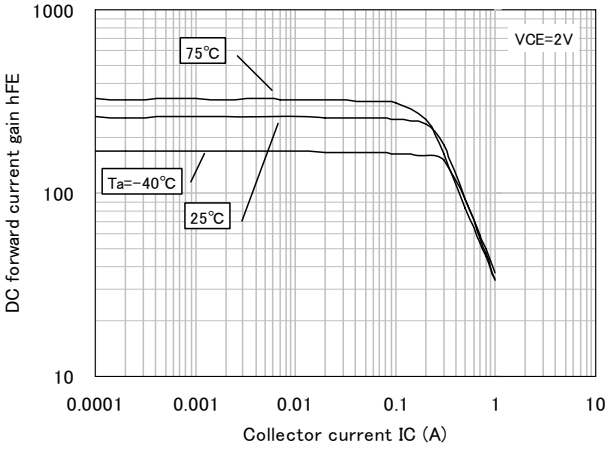
COMMON EMITTER OUTPUT



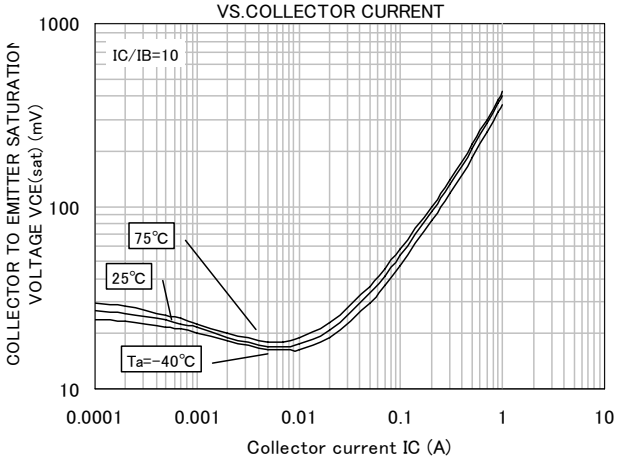
COMMON EMITTER TRANSFER



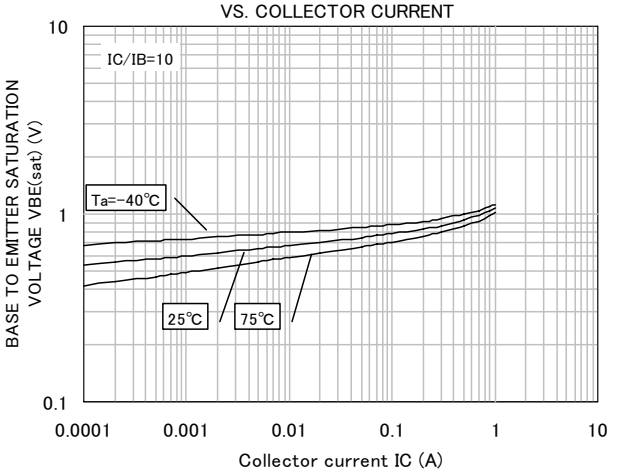
DC forward current gain VS. Collector current



COLLECTOR TO EMITTER SATURATION VOLTAGE
VS.COLLECTOR CURRENT



BASE TO EMITTER SATURATION VOLTAGE
VS. COLLECTOR CURRENT

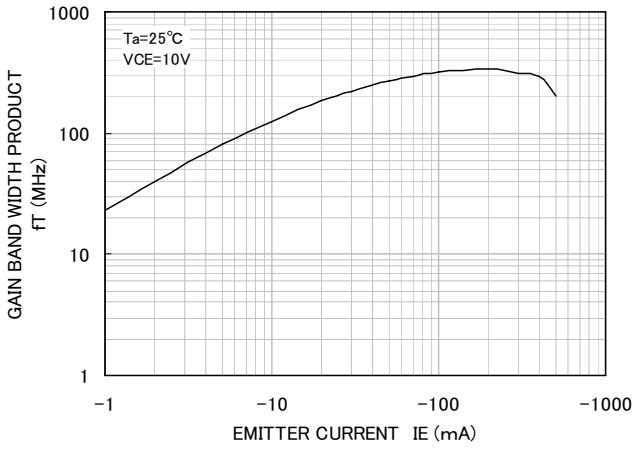


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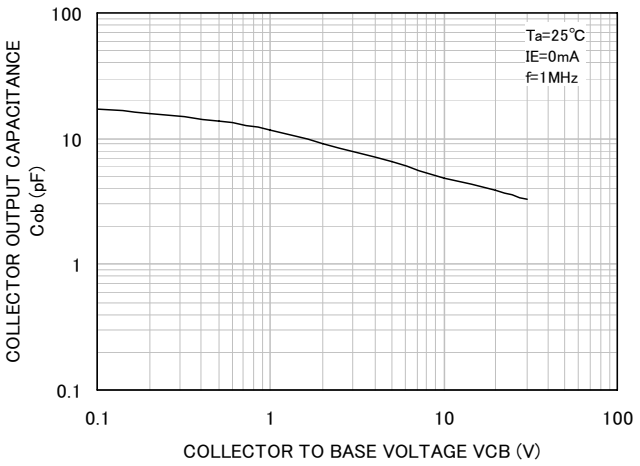
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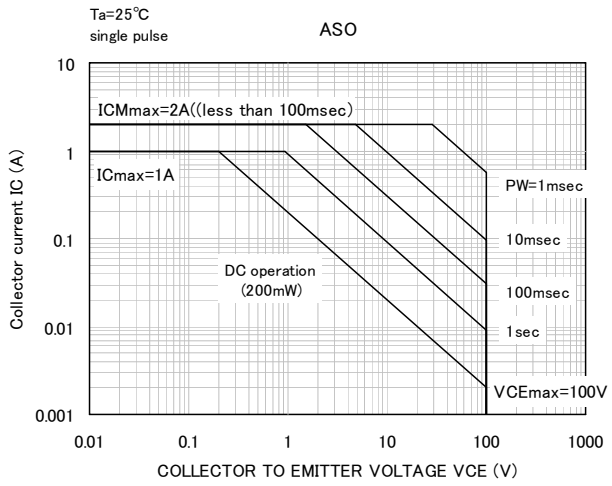
GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE



ASO



ISAHAYA ELECTRONICS CORPORATION

6-41 Tsukuba, Isahaya, Nagasaki, 854-0065 Japan

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Apr.2010