INC6005AC1

FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

INC6005AC1 is a silicon NPN transistor.
It is designed with high voltage.

FEATURE

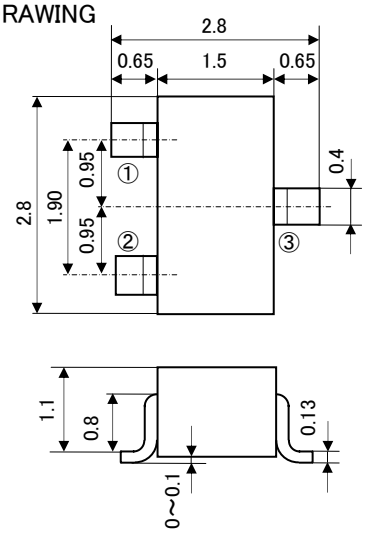
・Super mini package for easy mounting
・High voltage V_{CEO}=400V

APPLICATION

DC/DC convertor, High voltage switching

OUTLINE DRAWING

UNIT:mm



Terminal Connector
①:Base
②:Emitter
③:Collector

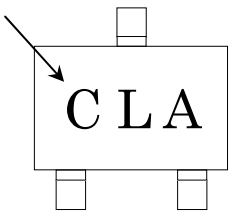
JEITA:SC-59
JEDEC: Similar to TO-236

MAXIMUM RATING(Ta=25℃)

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(Ta=25℃)	200	mW
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	−55～+150	℃

MARKING

Type Name

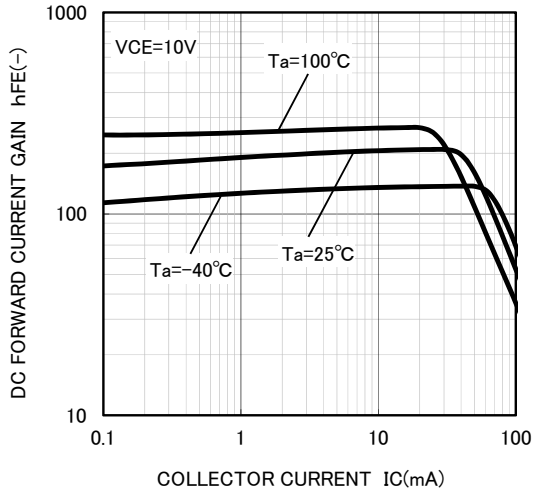


ELECTRICAL CHARACTERISTICS(Ta=25℃)

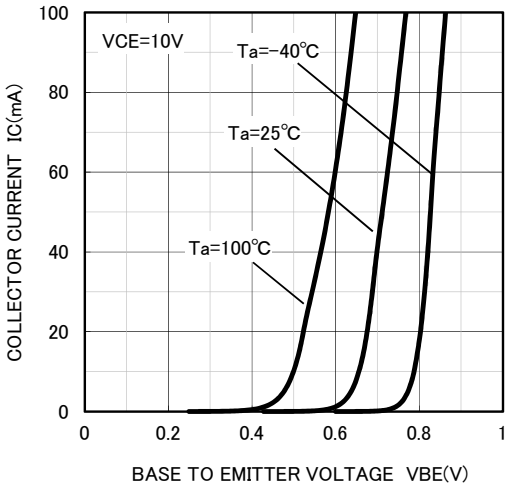
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B break down voltage	I_C=50μA, I_E=0mA	400	−	−	V
$V_{(BR)EBO}$	E to B break down voltage	I_E=50μA, I_C=0mA	7	−	−	V
$V_{(BR)CEO}$	C to E break down voltage	I_C=1mA, R_{BE}=∞	400	−	−	V
I_{CBO}	Collector cut off current	V_{CB}=400V, I_E=0mA	−	−	1	μA
I_{EBO}	Emitter cut off current	V_{EB}=6V, I_C=0mA	−	−	1	μA
h_{FE}	DC forward current gain	V_{CE}=10V, I_C=1mA	82	−	280	−
$V_{CE(sat)}$	C to E saturation voltage	I_C=10mA, I_B=1mA	−	−	0.5	V
f_T	Gain bandwidth product	V_{CE}=20V, I_E=−10mA, f=100MHz	−	70	−	MHz
Cob	Collector output capacitance	V_{CB}=10V, I_E=0mA, f=1MHz	−	3.3	−	pF

TYPICAL CHARACTERISTICS

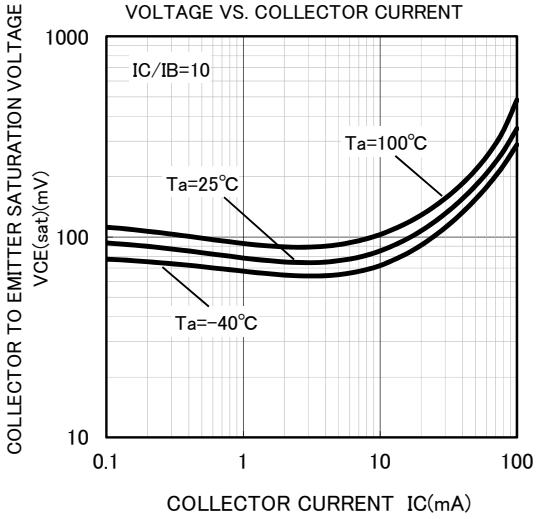
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



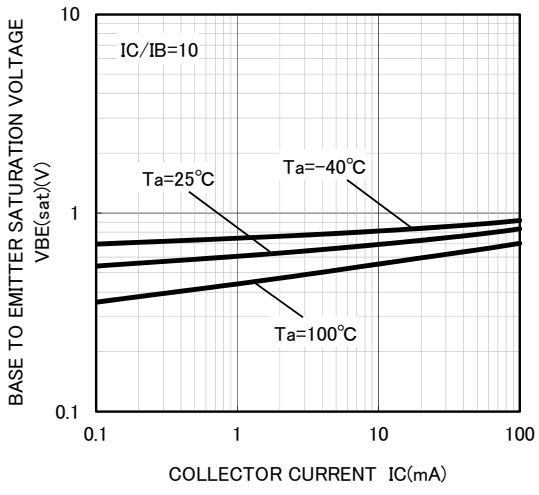
COMMON EMITTER TRANSFER



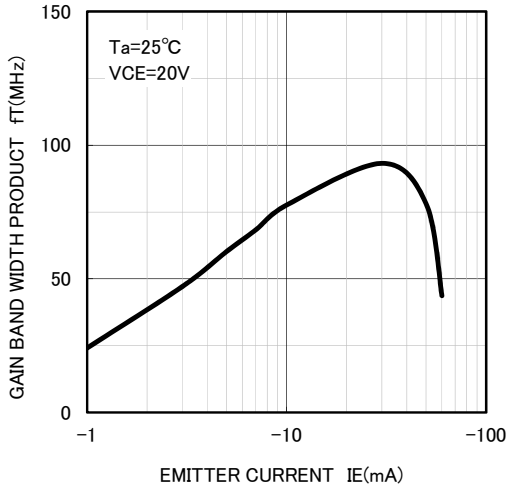
COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



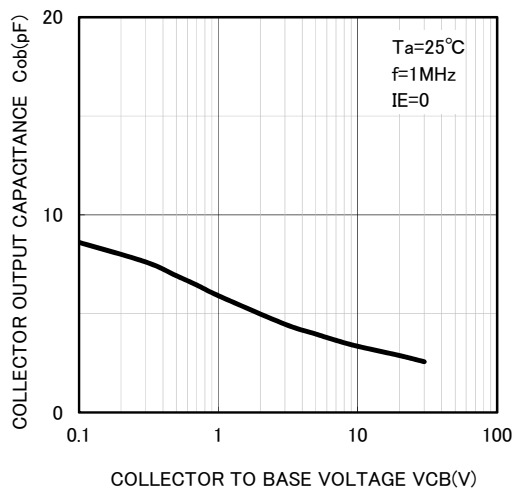
BASE TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT

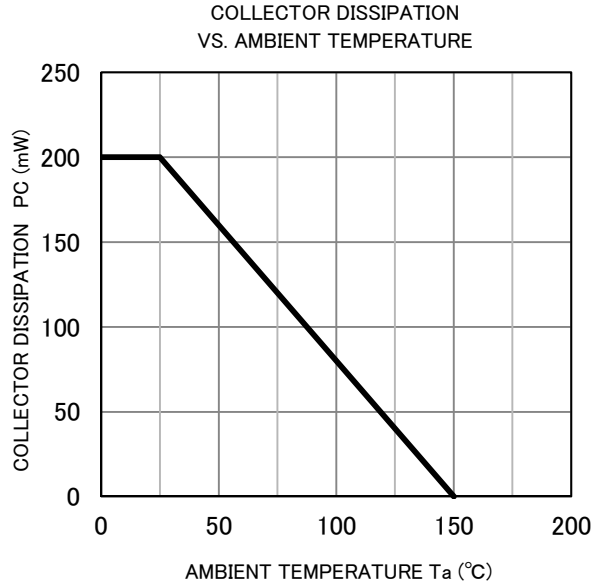


GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE




COLLECTOR DISSIPATION
VS. AMBIENT TEMPERATURE
COLLECTOR DISSIPATION PC (mW)
250
200
150
100
50
0
0
50
100
150
200
AMBIENT TEMPERATURE Ta (°C)

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