INC5006AC1-T150

FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

AEC-Q101 Compliance

DESCRIPTION

INC5006AC1 is a silicon NPN epitaxial type transistor.
It is designed with high collector current and small $V_{CE(sat)}$.

FEATURE

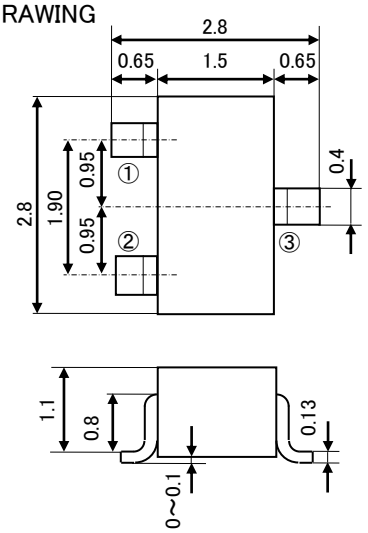
- Super mini package for easy mounting
- High collector current(I_C=3A)
- Low collector saturation voltage
  ($V_{CE(sat)}$<0.3V_{max}; I_C=1A、I_B=20mA)

APPLICATION

Switching, Small type motor drive

OUTLINE DRAWING

UNIT : mm



Terminal Connector
①: Base
②: Emitter
③: Collector

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

MAXIMUM RATING(Ta=25℃)

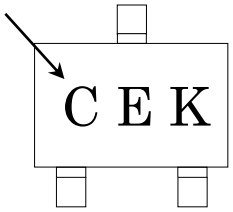
SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	100	V
V_{EBO}	Emitter to Base voltage	7	V
V_{CEO}	Collector to Emitter voltage	50	V
I_C	Collector current	3	A
P_C	Collector dissipation(Ta=25℃)	200	mW
		500(*)	
		900(**)	
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	−55～+150	℃

*Mounted on glass epoxy board(19mm×9mm×1mm)

**Mounted on ceramic board(19mm×9mm×1mm)

MARKING

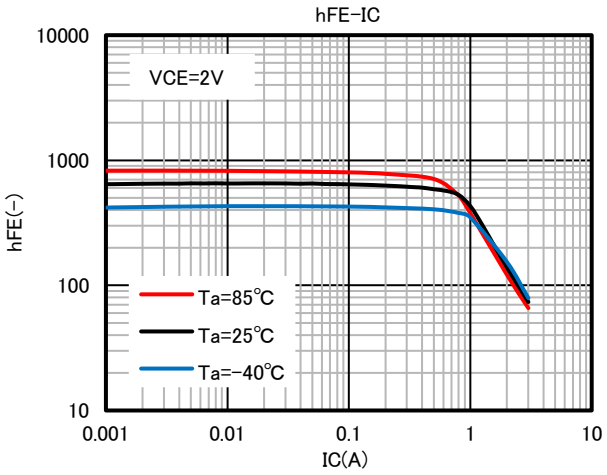
Type Name

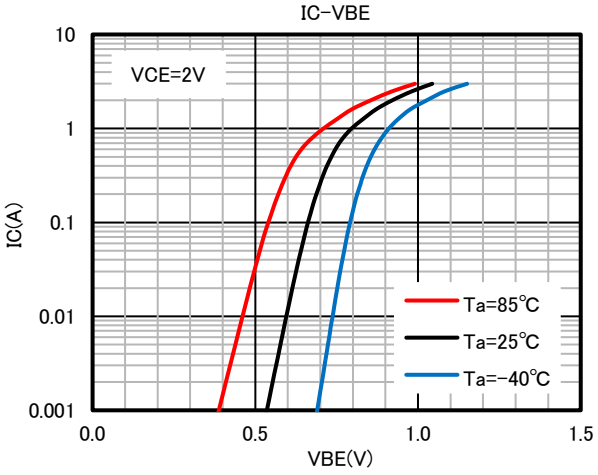


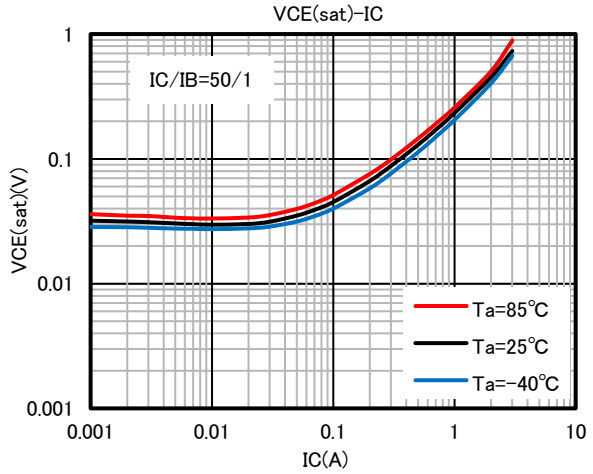
ELECTRICAL CHARACTERISTICS(Ta=25℃)

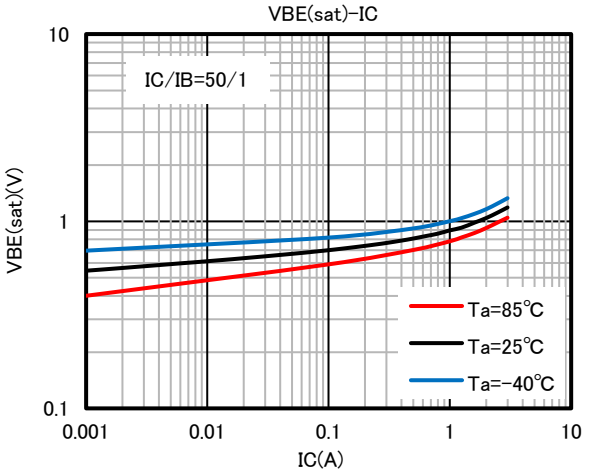
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B breakdown voltage	I_C=100μA, I_E=0mA	100	−	−	V
$V_{(BR)EBO}$	E to B breakdown voltage	I_E=100μA, I_C=0mA	7	−	−	V
$V_{(BR)CEO}$	C to E breakdown voltage	I_C=10mA, I_B=0mA	50	−	−	V
I_{CBO}	Collector cut off current	V_{CB}=100V, I_E=0mA	−	−	0.1	μA
I_{EBO}	Emitter cut off current	V_{EB}=7V, I_C=0mA	−	−	0.1	μA
h_{FE1}	DC forward current gain1	V_{CE}=2V, I_C=300mA	400	−	1000	−
h_{FE2}	DC forward current gain2	V_{CE}=2V, I_C=1A	200	−	−	−
$V_{CE(sat)}$	C to E saturation voltage	I_C=1A, I_B=20mA	−	−	0.3	V
$V_{BE(sat)}$	B to E saturation voltage	I_C=1A, I_B=20mA	−	−	1.1	V
f_T	Gain bandwidth product	V_{CE}=10V, I_E=−300mA, f=100MHz	−	250	−	MHz
Cob	Collector output capacitance	V_{CB}=10V, f=1MHz	−	13	−	pF

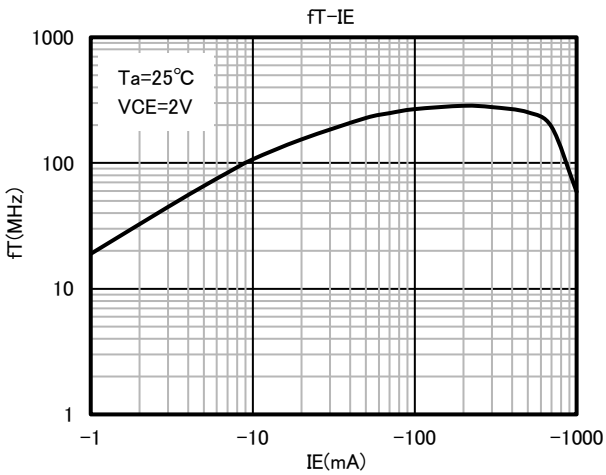
TYPICAL CHARACTERISTICS

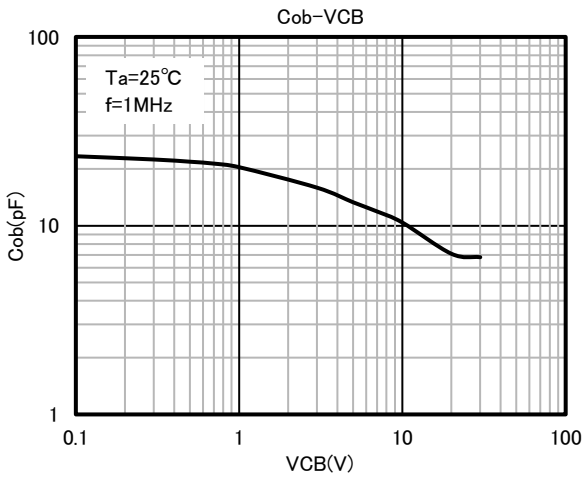


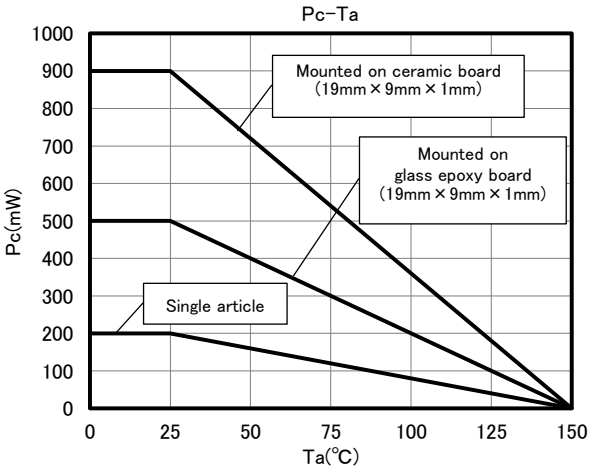


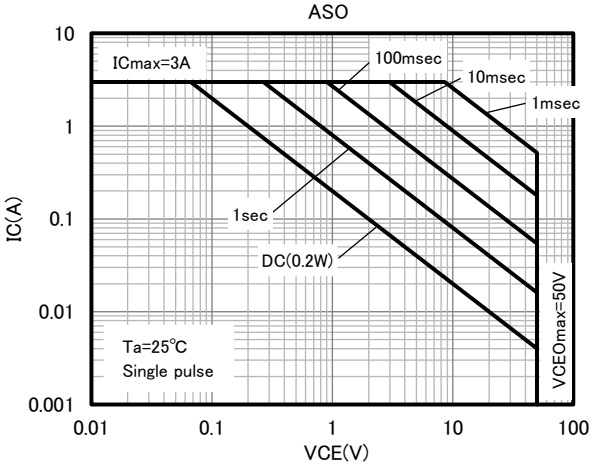









Pc-Ta
Pc(mW)
1000
900
800
700
600
500
400
300
200
100
0
0
25
50
75
100
125
150
Ta(℃)
Mounted on ceramic board
(19mm×9mm×1mm)
Mounted on
glass epoxy board
(19mm×9mm×1mm)
Single article


ASO
IC(A)
10
1
0.1
0.01
0.001
0.01
0.1
1
10
100
VCE(V)
ICmax=3A
100msec
10msec
1msec
1sec
DC(0.2W)
VCEOmax=50V
Ta=25℃
Single pulse

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