

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

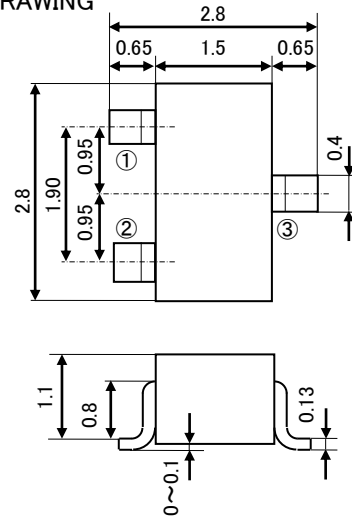
- Super mini package for easy mounting
- High collector current($I_C=3A$)
- Low collector saturation voltage
($V_{CE(sat)} < 0.3V_{max}$; $I_C=1A$, $I_B=20mA$)

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°C)

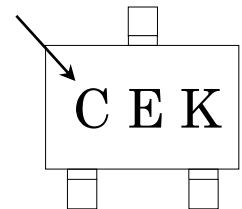
SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	100	V
V_{EBO}	Emitter to Base voltage	7	V
V_{CEO}	Collector to Emitter voltage	50	V
I_C	Collector current	3	A
P_C	Collector dissipation(Ta=25°C)	200	mW
		500(*)	
		900(**)	
T_j	Junction temperature	+150	°C
T_{stg}	Storage temperature	-55~+150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

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

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

MARKING

Type Name



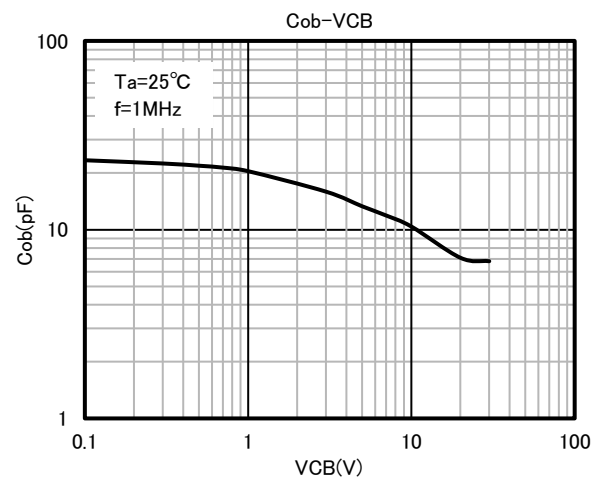
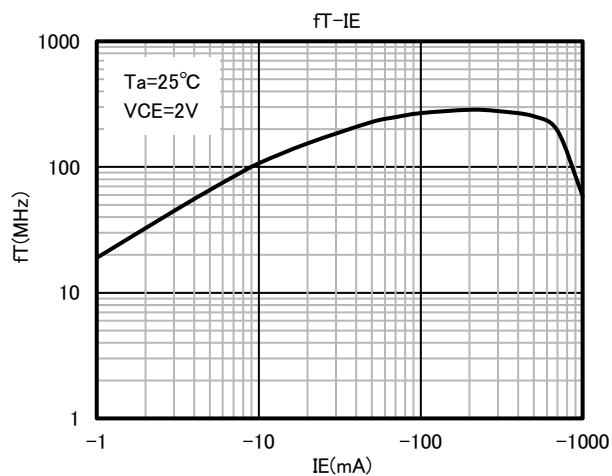
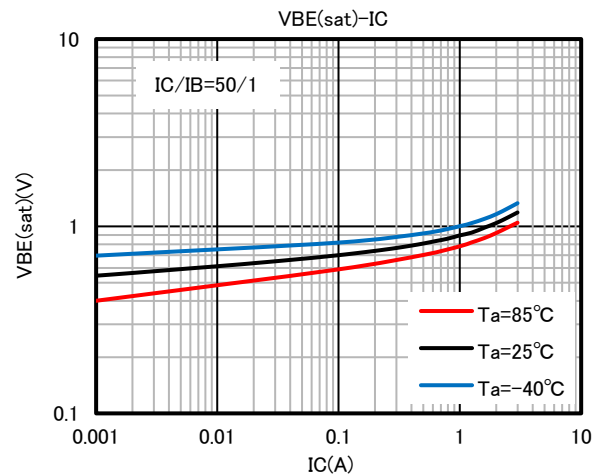
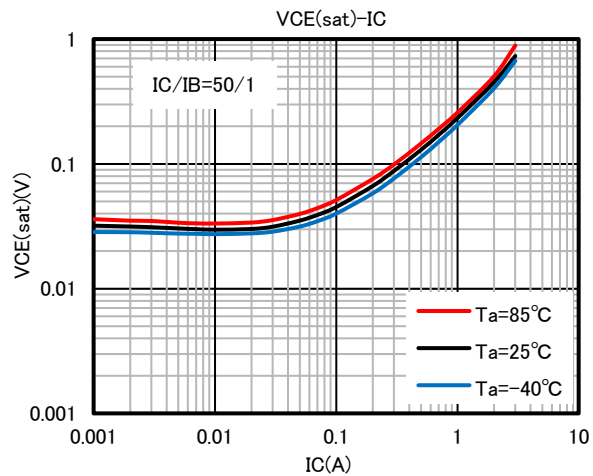
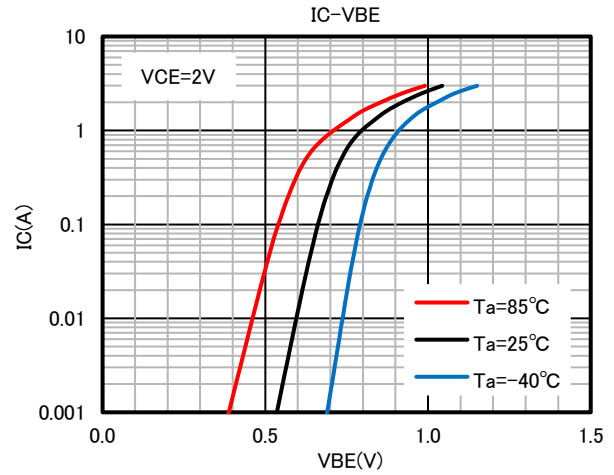
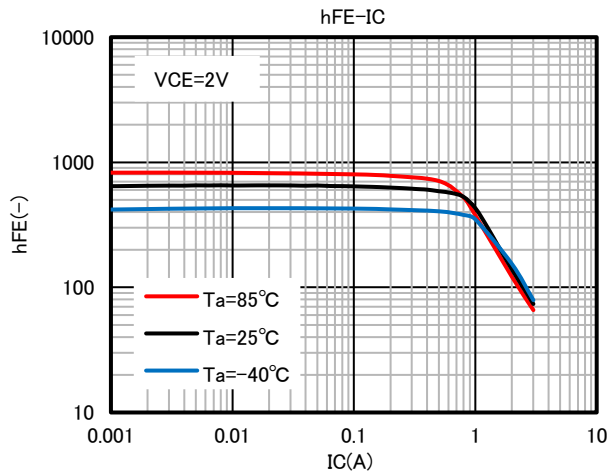
ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B breakdown voltage	$I_C=100\mu A$, $I_E=0mA$	100	—	—	V
$V_{(BR)EBO}$	E to B breakdown voltage	$I_E=100\mu A$, $I_C=0mA$	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
C_{ob}	Collector output capacitance	$V_{CB}=10V$, $f=1MHz$	—	13	—	pF

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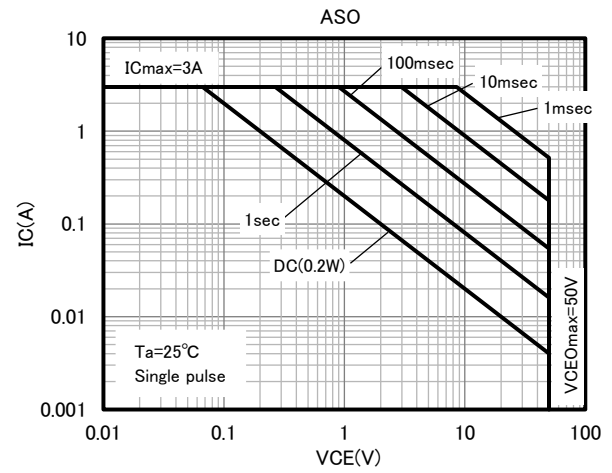
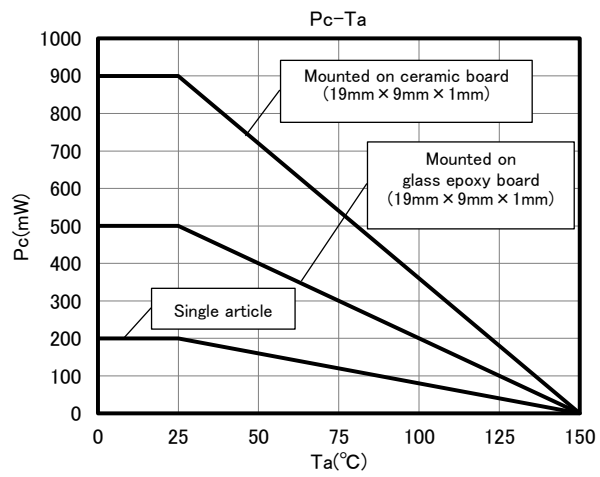
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SILICON NPN EPITAXIAL TYPE

TYPICAL CHARACTERISTICS



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SILICON NPN EPITAXIAL TYPE



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