

PRELIMINARY

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

INC5004AC1

FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

INC5004AC1 is a silicon NPN epitaxial type transistor.
It is designed with high collector current and small $V_{CE(sat)}$.

FEATURE

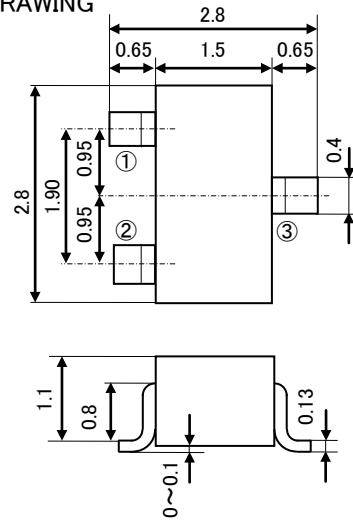
- Super mini package for easy mounting
- High collector current ($I_C=5A$)
- Low collector saturation voltage
($V_{CE(sat)} < 0.8V_{max}$; $I_C=3A$, $I_B=100mA$)

APPLICATION

Switching, Small type motor drive

OUTLINE DRAWING

UNIT: mm



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

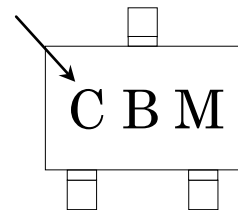
①: Base
②: Emitter
③: Collector

MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING	UNIT
V_{CEO}	Collector to Emitter voltage	20	V
V_{CBO}	Collector to Base voltage	50	V
V_{EBO}	Emitter to Base voltage	9	V
I_C	Collector current	5	A
P_C	Collector dissipation(Ta=25°C)	200	mW
T_j	Junction temperature	+150	°C
T_{stg}	Storage temperature	-55~+150	°C

MARKING

Type Name



ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	$I_C=1mA$, $I_B=0mA$	20	-	-	V
$V_{(BR)CBO}$	C to B break down voltage	$I_C=10 \mu A$, $I_E=0mA$	50	-	-	V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=10 \mu A$, $I_C=0mA$	9	-	-	V
I_{CBO}	Collector cut off current	$V_{CB}=40V$, $I_E=0mA$	-	-	0.1	μA
I_{EBO}	Emitter cut off current	$V_{EB}=7V$, $I_C=0mA$	-	-	0.1	μA
h_{FE1}	DC forward current gain1	$V_{CE}=2V$, $I_C=500mA$	230	-	600	-
h_{FE2}	DC forward current gain2	$V_{CE}=2V$, $I_C=2A$	150	-	-	-
$V_{CE(sat)}$	C to E saturation voltage	$I_C=3A$, $I_B=100mA$	-	0.28	0.8	V
f_T	Gain bandwidth product	$V_{CE}=6V$, $I_E=-50mA$, $f=100MHz$	-	150	-	MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V$, $f=1MHz$	-	-	50	pF



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Keep safety first in your circuit designs!

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