

**PRELIMINARY**

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

**INC5005AC1**

FOR HIGH CURRENT DRIVE APPLICATION  
SILICON NPN EPITAXIAL TYPE

**DESCRIPTION**

INC5005AC1 is a silicon NPN epitaxial type transistor.  
It is designed with high collector current and small  $V_{CE(sat)}$ .

**FEATURE**

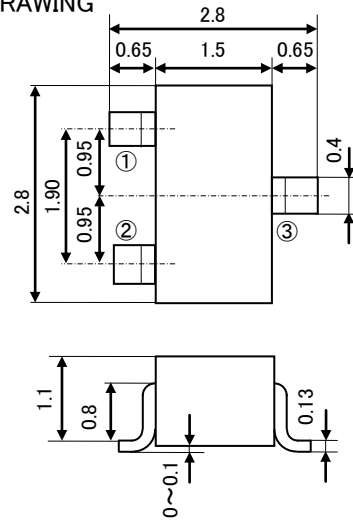
- Super mini package for easy mounting
- High collector current ( $I_C=1.5A$ )
- Low collector saturation voltage  
( $V_{CE(sat)} < 0.5V_{max}$ ;  $I_C=800mA$ ,  $I_B=80mA$ )

**APPLICATION**

Switching, Small type motor drive

**OUTLINE DRAWING**

UNIT : mm



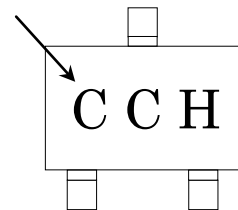
Terminal Connector JEITA:SC-59  
JEDEC: Similar to TO-236  
①: Base  
②: Emitter  
③: Collector

**MAXIMUM RATING (Ta=25°C)**

SYMBOL	PARAMETER	RATING	UNIT
$V_{CEO}$	Collector to Emitter voltage	25	V
$V_{CBO}$	Collector to Base voltage	45	V
$V_{EBO}$	Emitter to Base voltage	6	V
$I_C$	Collector current	1.5	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	$I_C=1mA$ , $I_B=0mA$	25	-	-	V
$V_{(BR)CBO}$	C to B break down voltage	$I_C=100\mu A$ , $I_E=0mA$	45	-	-	V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=100\mu A$ , $I_C=0mA$	6	-	-	V
$I_{CBO}$	Collector cut off current	$V_{CB}=45V$ , $I_E=0mA$	-	-	0.1	$\mu A$
$I_{EBO}$	Emitter cut off current	$V_{EB}=6V$ , $I_C=0mA$	-	-	0.1	$\mu A$
$h_{FE1}$	DC forward current gain1	$V_{CE}=1V$ , $I_C=5mA$	45	-	-	-
$h_{FE2}$	DC forward current gain2	$V_{CE}=1V$ , $I_C=100mA$	85	-	300	-
$h_{FE3}$	DC forward current gain3	$V_{CE}=1V$ , $I_C=100mA$	40	-	-	-
$V_{CE(sat)}$	C to E saturation voltage	$I_C=800mA$ , $I_B=80mA$	-	0.28	0.5	V
$V_{BE(sat)}$	B to E saturation voltage	$I_C=800mA$ , $I_B=80mA$	-	0.28	0.5	V
$V_{BE(on)}$	B to E on voltage	$V_{CE}=1V$ , $I_C=10mA$	-	0.66	1	V
$f_T$	Gain bandwidth product	$V_{CE}=10V$ , $I_E=-50mA$ , $f=100MHz$	100	300	-	MHz
$C_{ob}$	Collector output capacitance	$V_{CB}=10V$ , $f=1MHz$	-	6.5	-	pF



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**Keep safety first in your circuit designs!**

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