

**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**

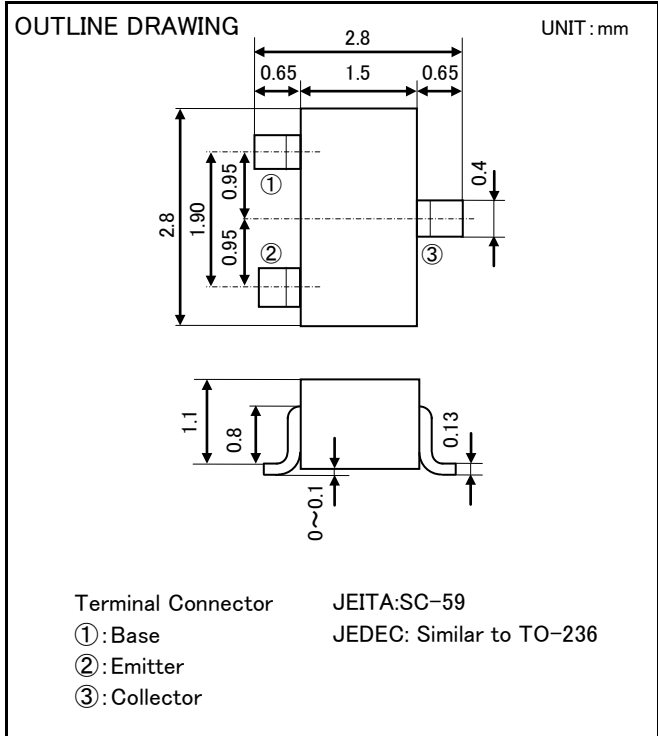
INC5004AC1 is a silicon NPN epitaxial type transistor.  
It is designed with high collector current and small  $V_{CE(sat)}$ .

**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**

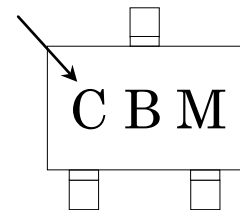
Switching, Small type motor drive

**MAXIMUM RATING ( $T_a=25^\circ C$ )**

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( $T_a=25^\circ C$ )	200	mW
$T_j$	Junction temperature	+150	$^\circ C$
$T_{stg}$	Storage temperature	-55 ~ +150	$^\circ C$

**MARKING**

Type Name

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )**

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	$\mu A$
$I_{EBO}$	Emitter cut off current	$V_{EB}=7V$ , $I_C=0mA$	-	-	0.1	$\mu A$
$h_{FE1}$	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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