

INC6008AC1

FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

INC6008AC1 is a silicon NPN epitaxial type transistor.
It is designed with high collector current and small $V_{CE(sat)}$.

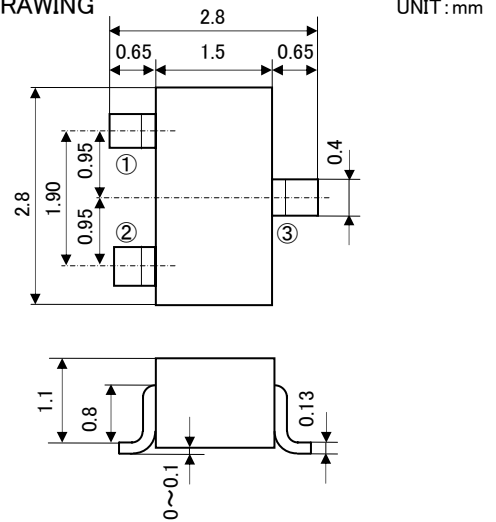
FEATURE

- Super mini package for easy mounting
- High collector current ($I_C=1A$)
- Low collector saturation voltage
($V_{CE(sat)} < 0.7V_{max}$; $I_C=150mA$, $I_B=15mA$)

APPLICATION

Switching, Small type motor drive

OUTLINE DRAWING



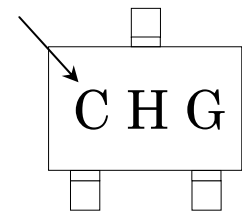
Terminal Connector JEITA:SC-59
JEDEC: Similar to TO-236
①: Base
②: Emitter
③: Collector

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

SYMBOL	PARAMETER	RATING	UNIT
V_{CEO}	Collector to Emitter voltage	140	V
V_{CBO}	Collector to Base voltage	160	V
V_{EBO}	Emitter to Base voltage	5	V
I_C	Collector current	1	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 ($T_a=25^\circ C$)

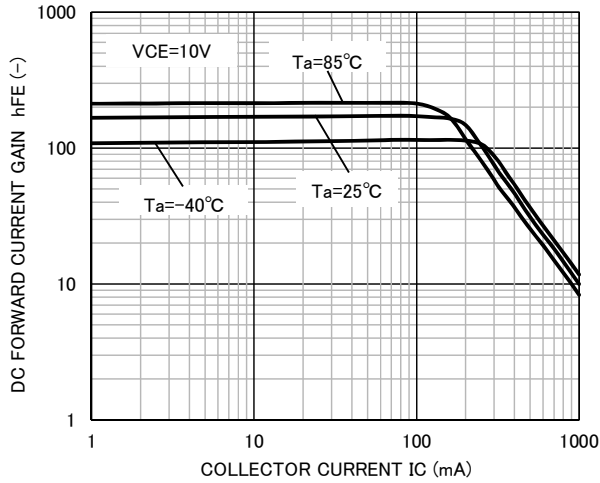
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E breakdown voltage	$I_C=10mA$, $I_B=0mA$	140	-	-	V
$V_{(BR)CBO}$	C to B breakdown voltage	$I_C=100\mu A$, $I_E=0mA$	160	-	-	V
$V_{(BR)EBO}$	E to B breakdown voltage	$I_E=100\mu A$, $I_C=0mA$	5	-	-	V
I_{CBO}	Collector cut off current	$V_{CB}=140V$, $I_E=0mA$	-	-	100	nA
I_{EBO}	Emitter cut off current	$V_{EB}=4V$, $I_C=0mA$	-	-	100	nA
h_{FE}	DC forward current gain	$V_{CE}=10V$, $I_C=150mA$	100	-	300	-
$V_{CE(sat)}$	C to E saturation voltage	$I_C=150mA$, $I_B=15mA$	-	-	0.7	V
$V_{BE(sat)}$	B to E saturation voltage	$I_C=150mA$, $I_B=15mA$	-	-	1.1	V
f_T	Gain bandwidth product	$V_{CE}=10V$, $I_E=-50mA$, $f=100MHz$	100	-	-	MHz
Cob	Collector output capacitance	$V_{CB}=10V$, $f=1MHz$	-	-	15	pF

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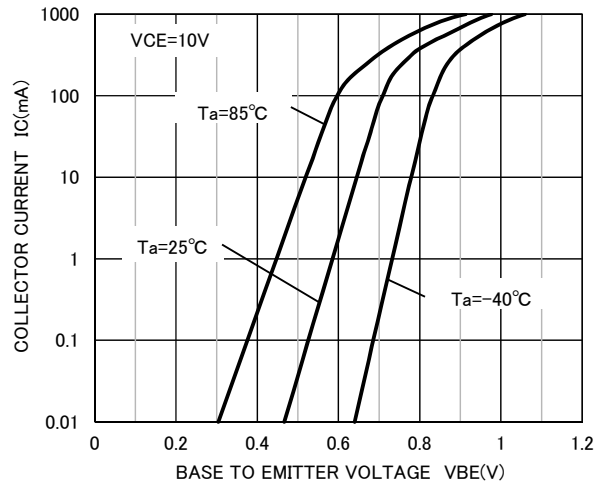
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TYPICAL CHARACTERISTICS (Ta=25°C)

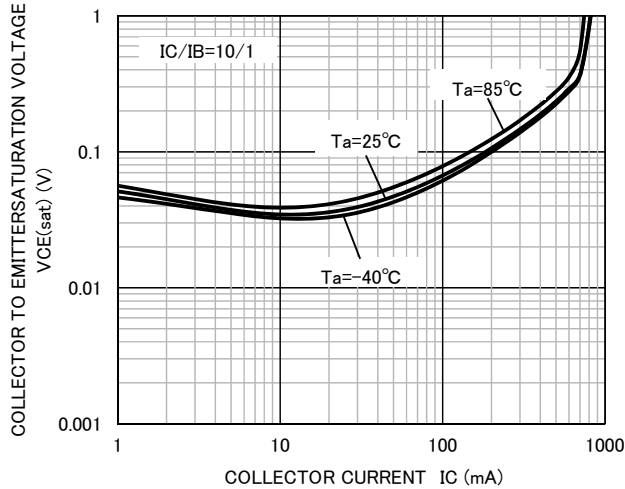
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



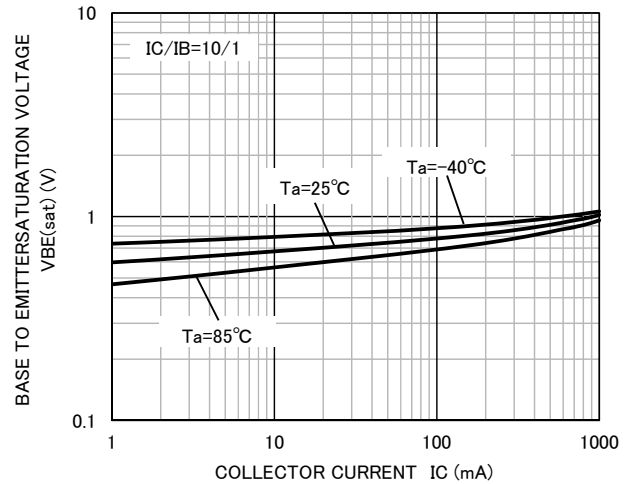
COMMON EMITTER TRANSFER



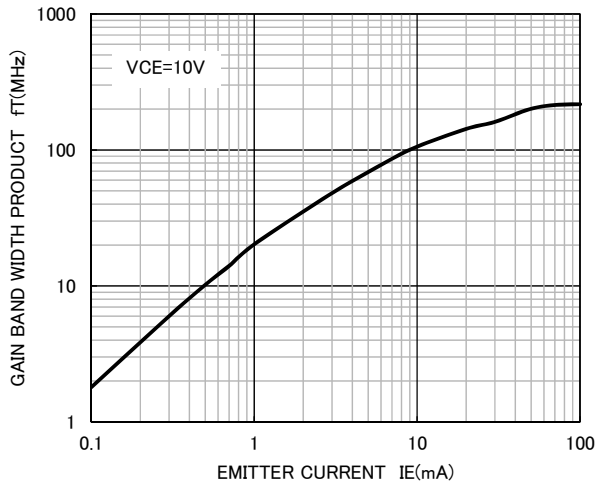
COLLECTOR TO EMITTERSATURATION
VOLTAGE VS. COLLECTOR CURRENT



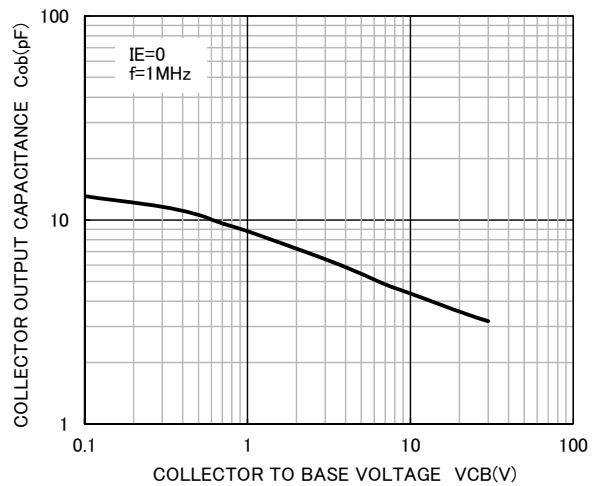
BASE TO EMITTERSATURATION VOLTAGE
VS. COLLECTOR



GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



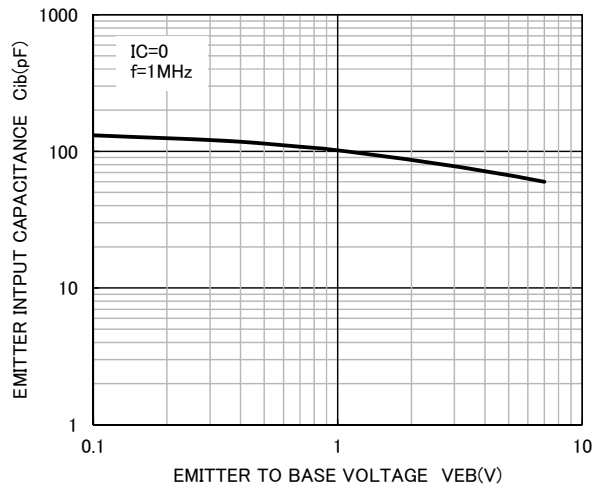
COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BAS



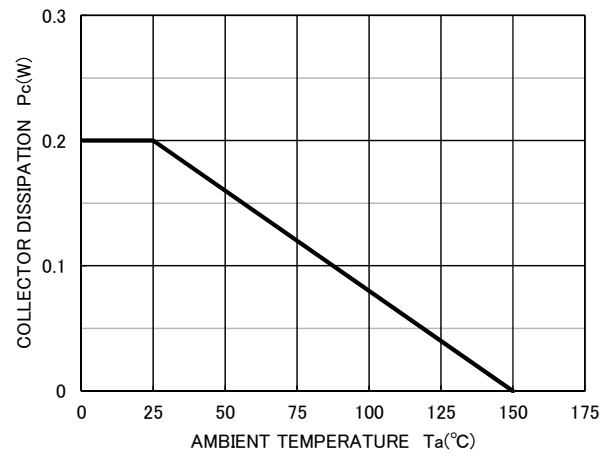
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EMITTER INPUT CAPACITANCE
VS. BASE TO EMITTER VOLTAGE



COLLECTOR DISSIPATION-AMBIENT TEMPERATURE





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