

# INC5001AP1

For low frequency power amplify  
Silicon NPN Epitaxial

## DESCRIPTION

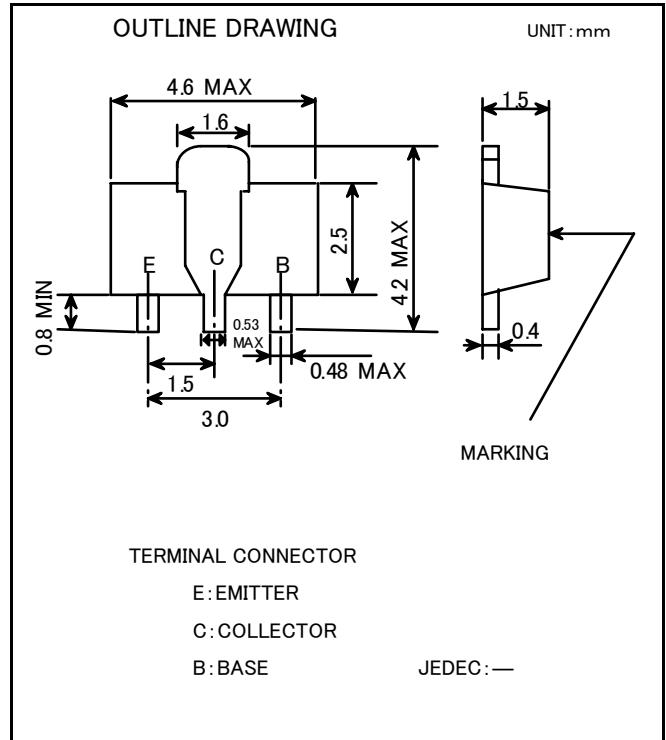
INC5001AP1 is a silicon NPN epitaxial transistor designed for relay drive or Power supply application.

## FEATURE

- Small package for easy mounting.
- High voltage  $V_{CE0}=60V$
- High collector current  $I_C=1A$
- Low  $V_{CE(sat)}$   $V_{CE(sat)}=0.25V$  max (@ $I_C=500mA/ I_B=50mA$ )
- High collector dissipation  $P_C=500mW$

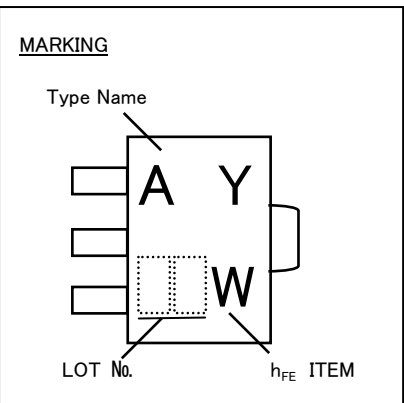
## APPLICATION

Relay drive, power supply for audio equipment, VTR, etc



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

SYMBOL	PARAMETER	RATING	UNIT
$V_{CBO}$	Collector to Base voltage	80	V
$V_{EBO}$	Emitter to Base voltage	5	V
$V_{CEO}$	Collector to Emitter voltage	60	V
$I_C$	Collector current	1	A
$I_{CM}$	Peak Collector current	2	
$P_C$	Collector dissipation( $T_a=25^\circ C$ )	500	mW
$T_J$	Junction temperature	+150	$^\circ C$
$T_{stg}$	Storage temperature	-55~+150	$^\circ C$



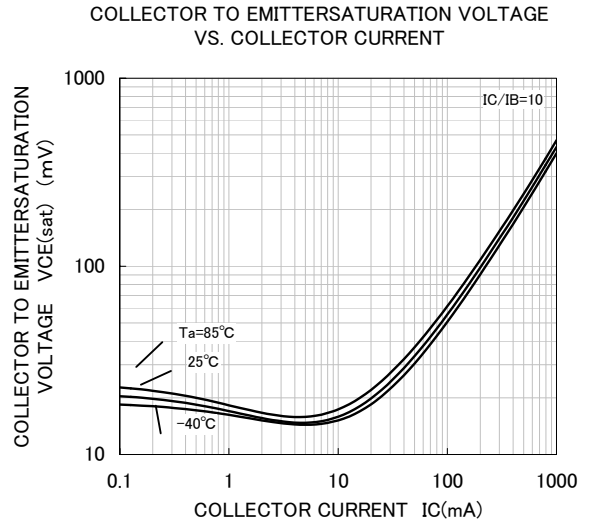
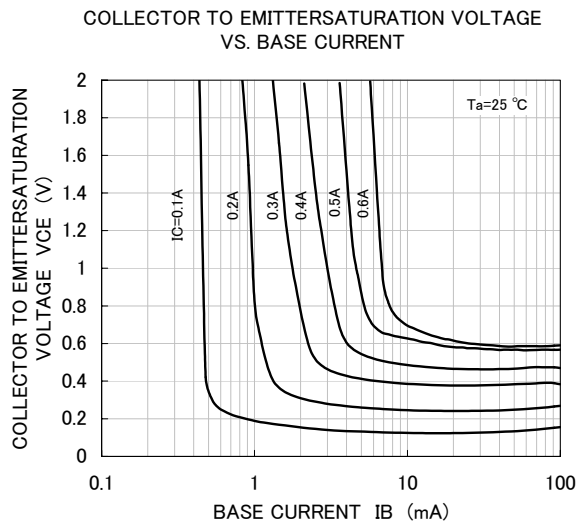
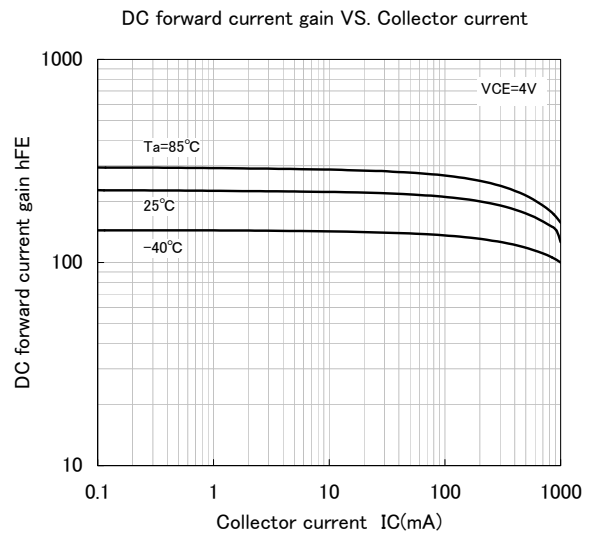
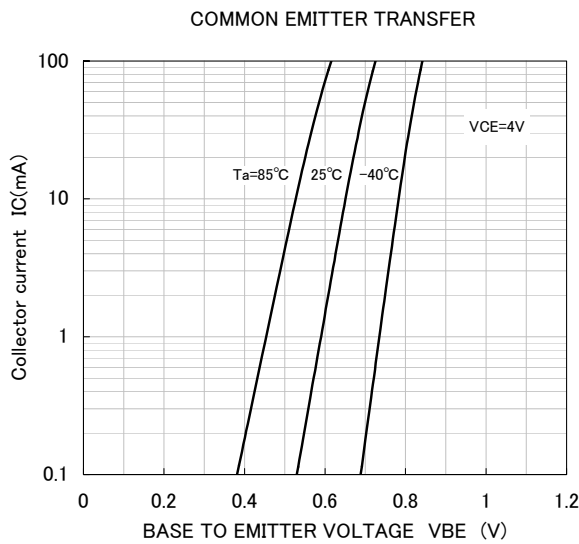
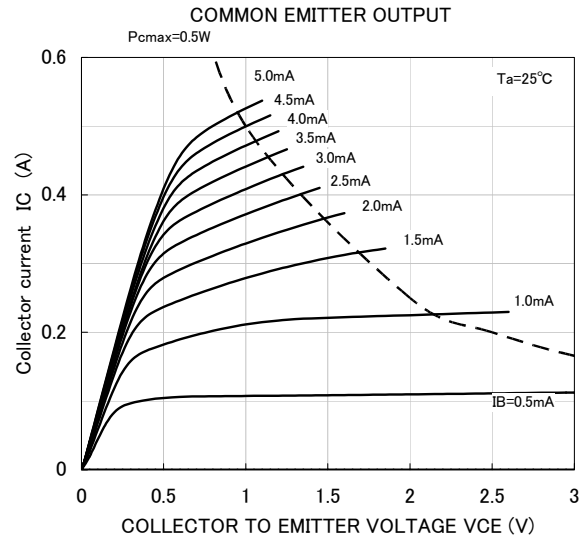
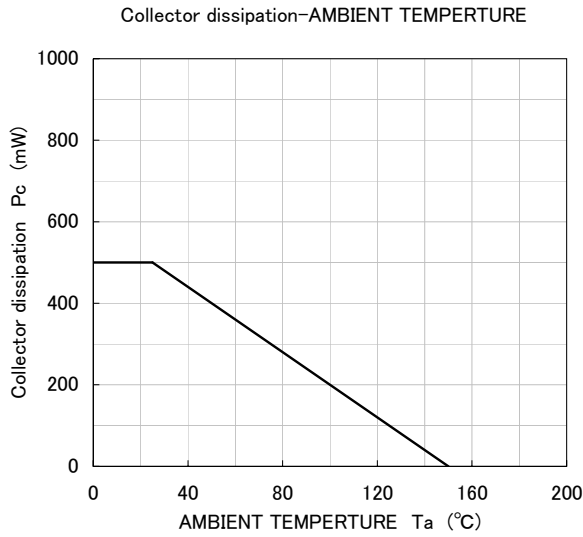
## ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=10 \mu A, I_E=0mA$	80			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=10 \mu A, I_C=0mA$	5			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=1mA, R_{BE}=\infty$	60			V
$I_{CBO}$	Collector cut off current	$V_{CB}=80V, I_E=0mA$			0.1	$\mu A$
$I_{EBO}$	Emitter cut off current	$V_{EB}=5V, I_C=0mA$			0.1	$\mu A$
$h_{FE}$	DC forward current gain	$V_{CE}=4V, I_C=0.1A$	130		320	-
$V_{CE(sat)}$	C to E saturation voltage	$I_C=500mA, I_B=50mA$			0.25	V
$f_T$	Gain band width product	$V_{CE}=10V, I_E=-50mA$	150			MHz
$C_{ob}$	Collector output capacitance	$V_{CB}=10V, I_E=0mA, f=1MHz$			10	pF

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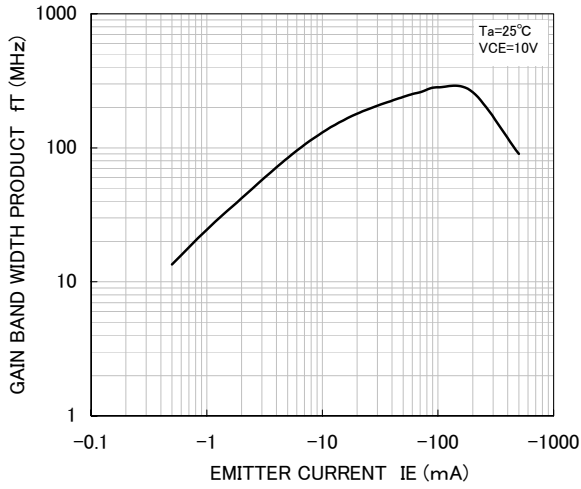
## TYPICAL CHARACTERISTICS



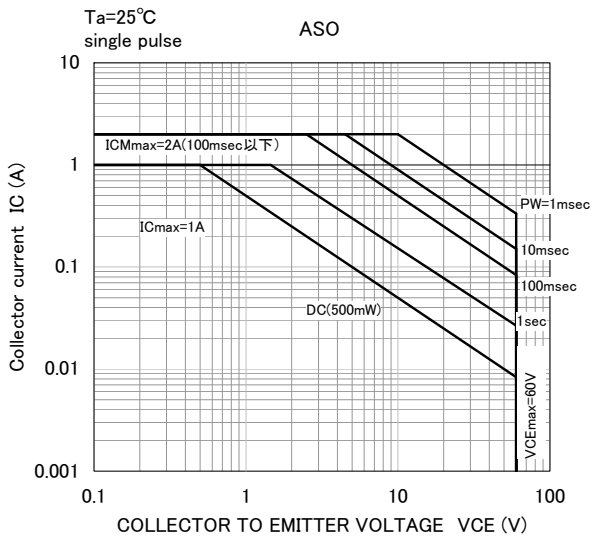
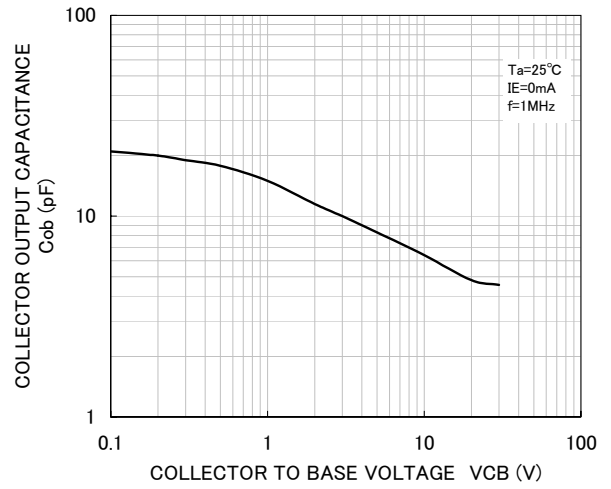
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GAIN BAND WIDTH PRODUCT  
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE  
VS. COLLECTOR TO BASE VOLTAGE





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