

# 2SA2002

For High Current Application  
Silicon PNP Epitaxial Type Micro

## DESCRIPTION

2SA2002 is a silicon PNP epitaxial type transistor designed with high collector current, small VCE(sat).

## FEATURE

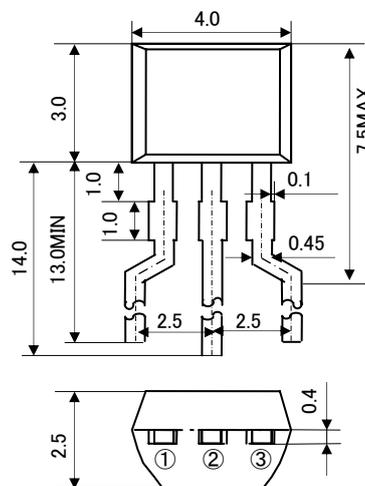
- High collector current  $I_{CM} = -1000\text{mA}$
- Low collector to emitter saturation voltage  
 $V_{CE(sat)} = -0.25\text{V}$  type(@ $I_C = -500\text{mA}, I_B = -25\text{mA}$ )
- High gain band width product  $f_T = 180\text{Hz}$  type
- High collector dissipation  $P_c = 600\text{mW}$

## APPLICATION

Small type motor drive, relay drive, power supply application

## OUTLINE DRAWING

UNIT: mm



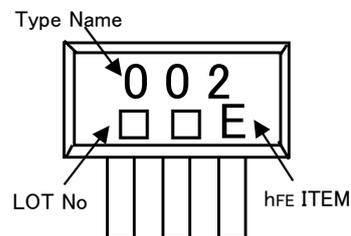
### TERMINAL CONNECTOR

- ①: EMITTER EIAJ: -
- ②: COLLECTOR JEDEC: -
- ③: BASE

## MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
$V_{CB0}$	Collector to Base voltage	-25	V
$V_{EB0}$	Emitter to Base voltage	-4	V
$V_{CE0}$	Collector to Emitter voltage	-20	V
$I_{CM}$	Peak collector current	-1000	mA
$I_C$	Collector current	-700	mA
$P_C$	Collector dissipation	600	mW
$T_j$	Junction temperature	+150	°C
$T_{stg}$	Storage temperature	-55~+150	°C

## MARKING



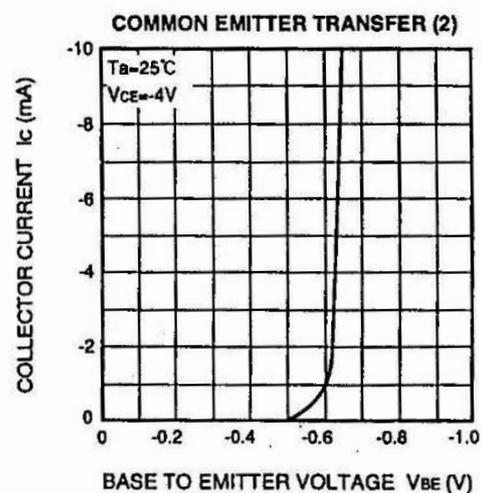
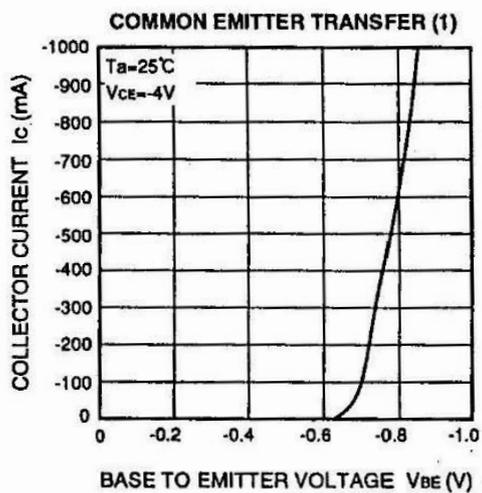
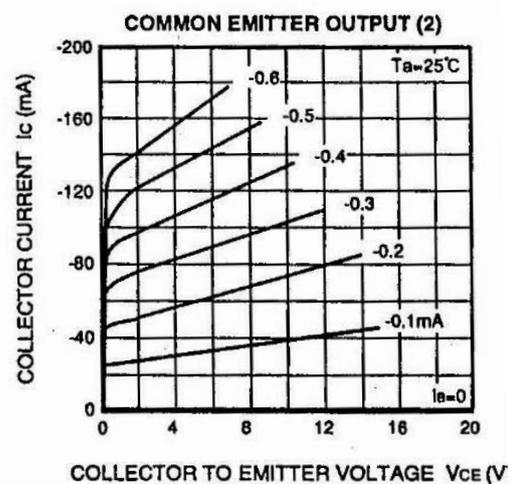
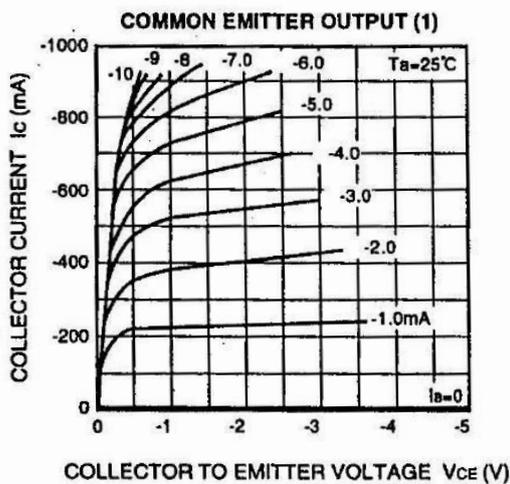
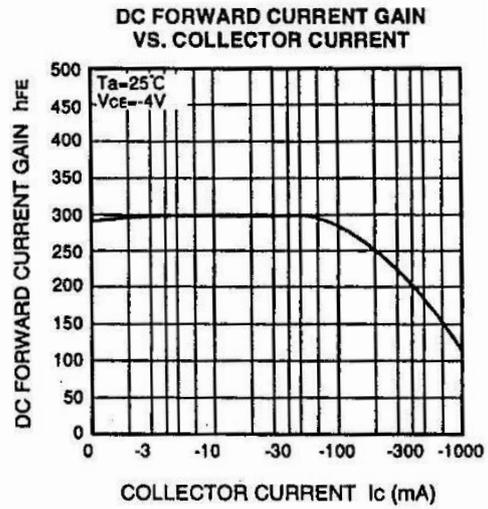
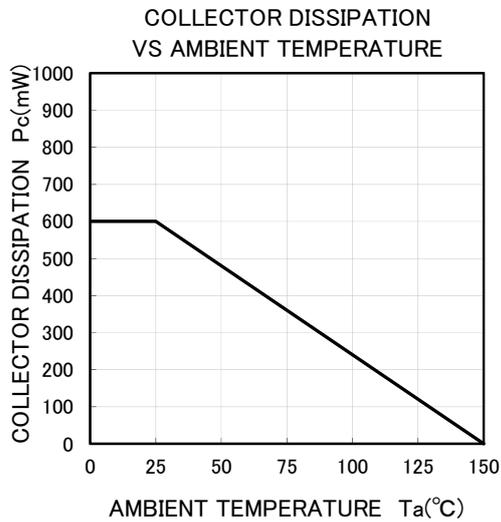
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CB0}$	C to B breakdown voltage	$I_C = -10 \mu A, I_E = 0$	-25	-	-	V
$V_{(BR)EB0}$	E to B breakdown voltage	$I_E = -10 \mu A, I_C = 0$	-4	-	-	V
$V_{(BR)CE0}$	C to E breakdown voltage	$I_C = -100 \mu A, R_{BE} = \infty$	-20	-	-	V
$I_{CB0}$	Collector cut off current	$V_{CB} = -25V, I_E = 0$	-	-	-1	$\mu A$
$I_{EB0}$	Emitter cut off current	$V_{EB} = -2V, I_C = 0$	-	-	-1	$\mu A$
hFE	DC forward current gain ※	$V_{CE} = -4V, I_C = -100mA$	150	-	800	-
$V_{CE(sat)}$	C to E Saturation voltage	$I_C = -500mA, I_B = -25mA$	-	-0.25	-0.5	V
$f_T$	Gain bandwidth product	$V_{CE} = -6V, I_E = 10mA$	-	180	-	MHz

※: It shows hFE classification at right table.

Item	E	F	G
hFE	150~300	250~500	400~800

## TYPICAL CHARACTERISTICS





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