

# 2SC6053

FOR HIGH CURRENT DRIVE APPLICATION  
SILICON NPN EPITAXIAL TYPE

## DESCRIPTION

2SC6053 is a mini package resin sealed silicon NPN epitaxial type transistor designed with high collector current, small  $V_{CE(sat)}$ .

## FEATURE

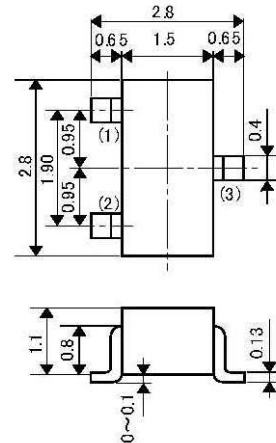
- Super mini package for easy mounting
- High collector current  $I_C = 650\text{mA}$
- Low collector to emitter saturation voltage  
 $V_{CE(sat)} = 0.5\text{V max}$

## APPLICATION

Small type motor drive, relay drive, power supply

## OUTLINE DRAWING

Unit: mm



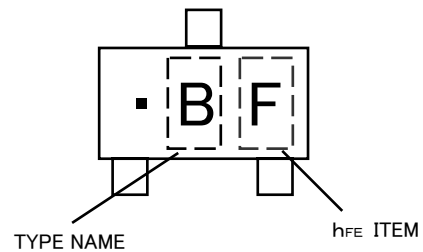
### TERMINAL CONNECTER

- ①: BASE
- ②: EMITTER EIAJ : SC-59
- ③: COLLECTOR JEDEC : TO-236 resemblance

## MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

Symbol	Parameter	Ratings	Unit
$V_{CBO}$	Collector to Base voltage	25	V
$V_{CEO}$	Collector to Emitter voltage	20	V
$V_{EBO}$	Emitter to Base voltage	4	V
$I_O$	Collector current	650	mA
$P_c$	Collector dissipation	150	mW
$T_j$	Junction temperature	+150	$^\circ\text{C}$
$T_{stg}$	Storage temperature	-55~+150	$^\circ\text{C}$

## MARKING



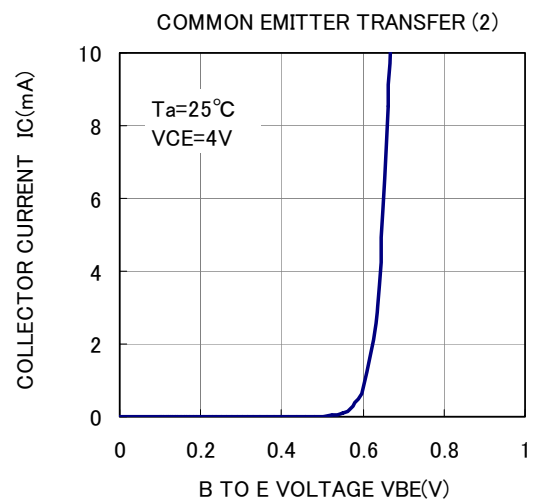
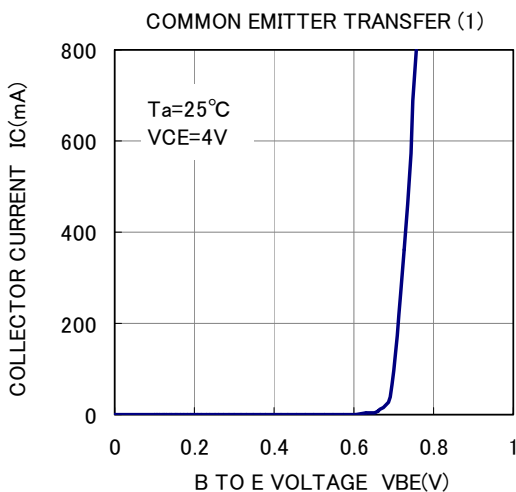
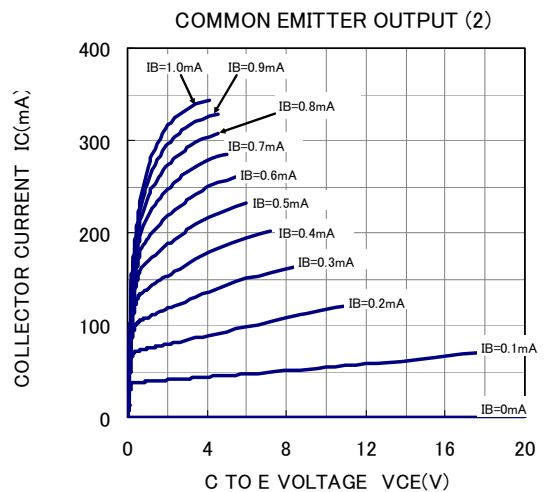
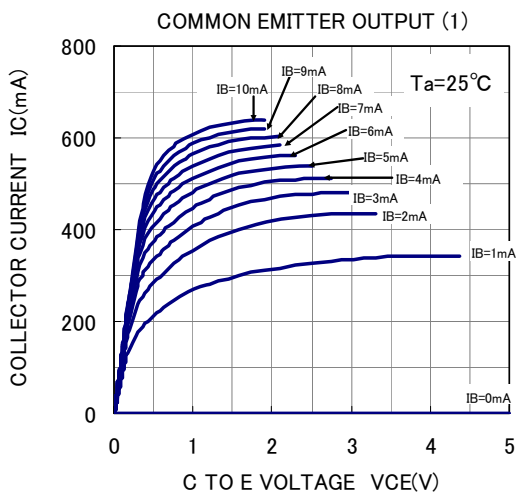
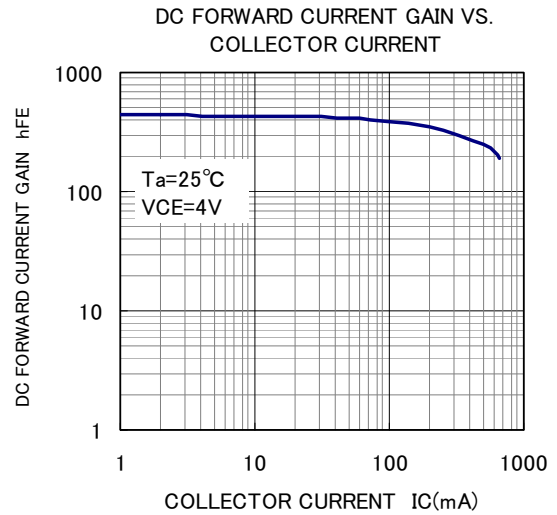
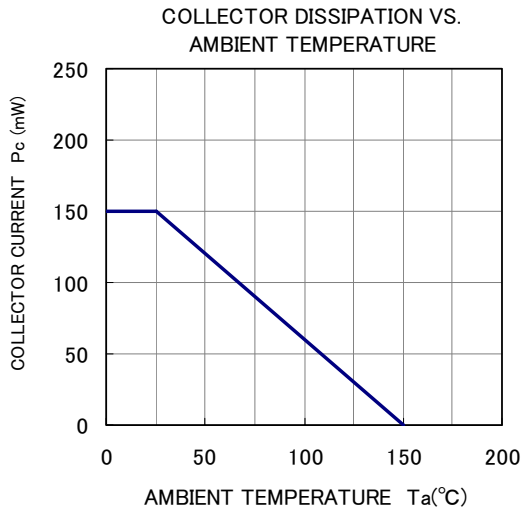
## ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
C to E break down voltage	$V_{(BR)CEO}$	$I_C=100\mu\text{A}$ , $R_{BE}=\infty$	20			V
C to B break down voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}$ , $I_E=0$	25			V
E to B break down voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}$ , $I_C=0$	4			V
Collector cut off current	$I_{CBO}$	$V_{CB}=25\text{V}$ , $I_E=0$			1	$\mu\text{A}$
Emitter cut off current	$I_{EBO}$	$V_{EB}=2\text{V}$ , $I_C=0$			1	$\mu\text{A}$
DC forward current gain	$h_{FE}^*$	$V_{CE}=4\text{V}$ , $I_C=100\text{mA}$	150		800	---
C to E saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$ , $I_B=25\text{mA}$		0.3	0.5	V
Gain band width product	fT	$V_{CE}=6\text{V}$ , $I_E=-10\text{mA}$		290		MHz

\* : It shows  $h_{FE}$  classification in right table.

Item	E	F	G
$h_{FE}$	150 to 300	250 to 500	400 to 800

TYPICAL CHARACTERISTICS



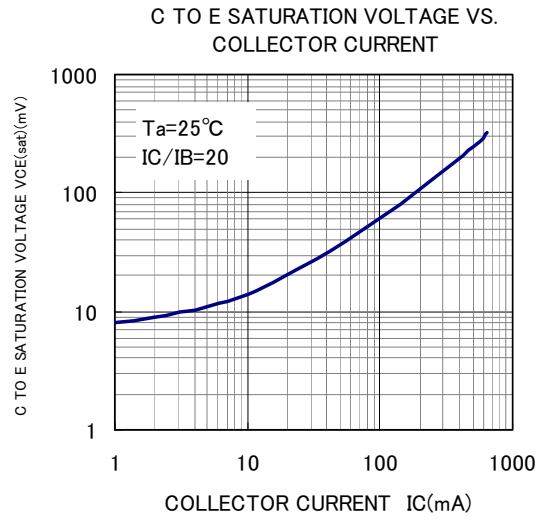
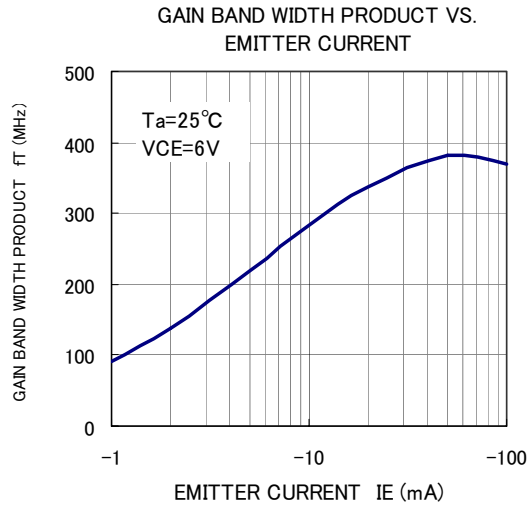
<SMALL-SIGNAL TRANSISTOR>

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TYPICAL CHARACTERISTICS





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